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Particular Regulation of the AENOR N Mark for Polypropylene pipes with mineral modifiers (PP-MD) for non-pressure underground drainage and sewerage.

Note: This document is a translation of the Spanish document RP 001.99 rev. 0 approved by the Plastics Technical Certification Committee (CTC-001). Spanish version always prevails over this translation.

RP 001.99

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1 Purpose and scope

This Particular Regulation describes, in compliance with section 3.2 of the General Regulation for the Certification of Products and Services with N Mark, the certification scheme for Polypropylene pipes with mineral modifiers (PP-MD), for non-pressure underground drainage and sewerage, complementing the Particular Regulation of the AENOR N Mark for plastic materials-common requirements (RP 001.00). The General Regulation prevails in any case over this Particular Regulation.

The N Mark for Polypropylene pipes with mineral modifiers (PP-MD) for non-pressure underground drainage and sewerage, hereinafter the Mark, is a mark of conformity of these products in accordance with the UNE-EN 14758 standard.

2 Definitions and particularities

Series: It is the set of pipes manufactured for the same use. Two series are distinguished:

- "U" series: Used outside the building structure.
- "UD" series: Used outside and inside the building structure.

SN: Value of annular stiffness the circumferential.

Class: It is called a class of pipes to the set of the same ones that have the same diameter and the same SN.

3 Sampling and testing for the granting and maintenance of the N mark certificate for products

3.1 Tests to be carried out in the factory (See RP 001.00)

During the initial inspection or maintenance visit, AENOR will carry out the tests indicated in Table 1 at the factory.

3.2 Sampling and testing to be performed in the laboratory (See RP 001.00)

AENOR will select and reference the samples necessary to carry out the tests indicated in the laboratory table 1.

	TEST	GARANTING/ MAINTAINING	RESULTS EVALUATION
TESTS TO BE CARRIED OUT BY THE INSPECTOR IN THE FACTORY	Appearance	10 pipes randomly	1
	Mean outside diameter	1 pipe/class	2
	Mean inside diameter	1 pipe/class	2
	Total wall thickness	1 pipe/class	3
	Maximum wall thickness external/internal layer	1 pipe/class	3
	Effective length	10 pipes randomly	2
TESTS TO BE CARRIED OUT BY THE LABORATORY	MATERIALS CHARACTERISTICS		
	Melt mass-flow rate (a sample of PP-base from which the pipe has been manufactured)	1 class randomly	1
	Thermal stability (OIT)	1 class randomly	1
	Dispersion of mineral modifiers	1 class randomly	1
	Resistance to internal pressure 80° 140 h	1 class randomly	1
	Resistance to internal pressure 95° 1000 h	1 class randomly	1
	PIPES		
	Ring stiffness	20% of classes, min. 2 tests per SN	1
	Ring Flexibility	20% of classes, min. 2 tests per SN	1
	Impact resistance (round-the-clock method)	20% of classes, min. 2 tests per SN	1
	Impact resistance (staircase method, applied to low temperatures)	20% of classes, min. 2 tests per SN	1
	Longitudinal reversión	20% of classes, min. 2 tests per SN	1
	Tightness of elastomeric sealing ring joint	1 test per SN and type of joint	1
	Elevated temperature cycling (only for application area code "D" and for DN/OD ≤ 200.	1 test per SN and type of joint	1

TABLE 1

4 Manufacturer internal control

4.1 Pipe raw materials

- **Raw materials:** The manufacturer who uses it must ensure that the mixtures and compounds involved in the manufacture of the pipes have adequate characteristics by verifying that the specifications of the material received in the Certificate of Analysis comply with the established purchase requirements and comply with the requirements established in point 5 of the product standard including Annex A referring to the use of recycled material.
- **PP-MD material:** The base material for the pipes must be polypropylene to which a mineral modifier(s) of known specification has been added and which contains the necessary additives to facilitate manufacture.
- **PP compound for exterior/interior walls:** The PP compound to produce exterior/interior walls must be base polypropylene to which the necessary additives must be added to facilitate production and recycled material according to the requirements of the standard.
- **Elastomeric sealing ring:** Joint material must meet the requirements of EN 681-1 or EN 681-2 standards as applicable.

4.2 Characteristics subject to control

- **Controls during manufacture and on final product:** the tests and the frequency of these are given in Table 2.

TEST	FREQUENCY
Appearance	Every 4 h/extrusion line
Mean outside diameter	
Mean inside diameter	
Total wall thickness	
Maximum wall thickness external/internal layer	
Effective length	
CHARACTERISTICS OF THE RAW MATERIAL	
Melt mass-flow rate (a sample of PP-base from which the pipe has been manufactured)	1 random class
Thermal stability (OIT)	
Dispersion of mineral modifiers	
Resistance to internal pressure 80° 140 h	
Resistance to internal pressure 95° 1000 h	
PIPES	
Ring stiffness	By manufacturing period. Minimum 1 time a week
Ring flexibility	
Impact resistance (round-the-clock method)	
Impact resistance (staircase method, applied to low temperatures)	
Longitudinal reversión	For each line. Minimum 2 times a week
Tightness of elastomeric sealing ring joint	Minimum 1 class per year per type of board
Elevated temperature cycling (only for application area code "D" and for DN/OD ≤ 200.	

TABLE 2

5 Marking of certified products

The marking on tubes shall include at least the following:

- AENOR N Mark logotype
- AENOR Certificate number: 001/XXX
- Number of the standard UNE-EN 14758
- Manufacturer's name and/or trademark
- Material: PP-MD
- Nominal size (DN/OD) x Minimum wall thickness
- Application area code, U or UD
- Ring stiffness class, SN
- CT for close tolerance (only if applicable)
- Cold climate performance: ❄ (when tested at −10 °C)
- Manufacturer´s information (bach, manufacturing period, year, and month, etc)

The pipes shall be marked at least every 2 metres.

Example: AENOR-Logo N -001/XXX-UNE-EN 14758 -Trademark-PP-MD -DN 200x6,2 SN 10-U - Manufacturer's information.

Annex C
Descriptive questionnaire Polypropylene pipes with mineral modifiers (PP-MD) for non-pressure underground drainage and sewerage.

CLIENT:

MANUFACTURER COMPANY:

SITE OF MANUFACTURE:

PRODUCT:

MATERIAL:

STANDARD(S):

TRADEMARK (S):

DATE:

RANGE FOR WHICH YOU APPLY FOR THE BRAND		
DN/OD	**STIFFNESS CLASS (SN)**	**APPLICATION AREA (U/ UD)**

For any change of these date, the client will send on duplicate to the Committee Secretary this descriptive questionnaire updated.

…….…… on …… of …… 20…...

SIGNATURE AND STAMP OF THE MANUFACTURER