AENOR
Confía

AENOR N Mark Specific Rules for Polyethilene (PE) pipes and fittings plastic for soil and waste discharge (low and high temperature) inside buildings

Note: This document is a translation of the Spanish document RP 001.87 rev. 3 approved by the Plastics Technical Certification Committee (CTC-001). Spanish version always prevails over this translation.

RP 001.87

Revision 3

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1 Purpose and scope

These specific rules describe, in compliance with section 3.2 of the General rules for the N Mark Certification of Products and Services, hereafter the General Rules, the specific rules for Polyethylene (PE) pipes and fittings for soil and waste discharge (low and high temperature) inside buildings. The present Specific Rules complete the AENOR N Mark Specific Rules for plastic materials – common requirements (RP 001.00). The General Rules always prevail over the present Specific Rules.

The N Mark for Polyethylene (PE) pipes and fittings for soil and waste discharge (low and high temperature) inside buildings, hereafter the Mark, denotes product compliance with the standard SANS 8770:2008 and/or UNE-EN 1519-1-2022.

2 Definitions and special requirements

By means of the application of this Specific Rules, it is possible to obtain the N Mark certificate for the following products:

- PE Pipes
- PE fittings

The certification applicants shall submit and independent application for each product.

Reference: It is considered a reference the set of pipes that have the same diameter and nominal wall thickness, and in the case of fittings the set of them that have the same nominal dimensions and shape.

3 Sampling and testing for granting and maintaining the product N Mark certificate

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

AENOR will carry out the test indicated in table 1 (pipes), 2 (fittings), where required, during the initial or surveillance inspection.

3.2 Sampling and tests to be carried out by the laboratory (See RP 001.00)

AENOR will select and mark the necessary samples to carry out in the laboratory the test indicated in table 1 (pipes), 2 (fittings) where required.

The manufacturer will send the selected samples to the laboratories indicated by AENOR, within 7 days since the date of the inspection, and in case that requires it because it considers it to be necessary, the client will send the competent professional technical staff to carry out the welding or assembly tasks required for the mounting of the test.

TABLE 1 - PIPES

	TEST	GRANTING / MAINTANING	RESULTS EVALUATION
TESTS TO BE CARRIED OUT BY THE INSPECTOR IN THE FACTORY	Appearance	10 pipes randomly	1
	Mean outside diameter	1 pipe per reference. Minimum 10 pipes	2
	Wall thickness	1 pipe per reference. Minimum 10 pipes	3
	Effective lenght	10 pipes randomly	2
TESTS TO BE CARRIED OUT BY THE LABORATORY	Longitudinal reversión	15% references/minimum 2	1
	Melt mass flow rate (MFR) (compound + pipe)	1 reference randomly	1
	Oxidation Induction Time (OIT) (1)	1 reference randomly	1
	Ring stiffness (Just BD)	20% of the classes, minimum 2	1

(1) If the raw material is the same for pipes and fittings, the OIT test must only be carried out in one of them.

TABLE 2 - FITTINGS

	TEST	GRANTING / MAINTANING	RESULTS EVALUATION
TESTS TO BE CARRIED OUT BY THE INSPECTOR IN THE FACTORY	Appearance	2 fittings per reference	1
	Mean outside diameter	2 fittings per reference	2
	Wall thickness of the body and socket	2 fittings per reference	3
	Lenght of the sockets	2 fittings per reference	2
TESTS TO BE CARRIED OUT BY THE LABORATORY	Effects of heating	Granting: 3 fittings of the 10% of the references, máx 8 Surveillance: 3 fittings of the 10% of the references, máx 5	1
	Oxidation Induction Time (OIT) (1)	1 reference randomly per raw material	1
	Melt mass flow rate (MFR) (compound + fitting) (1)	1 reference randomly	1
	Watertightness (2)	3 references randomly	1
	Air tightness (2)	3 references randomly	1
	Elevated temperature cycling	1 assembly randomly	1
	Leaktighness of the joint with elastomeric seal (Just BD)	1 class / type of assembly and joint	1
	Resistance to internal pressure 165h-80°C (Just BD)	1 assembly randomly	1

(1) If the raw material is the same for pipes and fittings, the OIT and MFR test must only be carried out in one of them.

(2) Not required for butt fusion joints

4 Manufacturer internal control

4.1 Raw material for pipes and fittings

The manufacturer must guarantee that the mixtures, compounds involved in the manufacture of the pipes and fittings have appropriate characteristics. In addition, will assure that the specifications provided in the Certificate of Analysis, comply with the purchase requirements established.

4.2 Final products control

Tests and their frequency are stated in tables 3 (pipes) and 4 (fittings)

TABLE 3 - PIPES

TEST	GRANTING/ MAINTANING
Appearance	Every four hours per extrusion line.
Mean outside diameter	
Wall thickness	
Effective lenght	
Longitudinal reversión	Per extrusion line, minimum twice a week
Melt mass flow rate (MFR) (compound + pipe)	Every three batches of raw material
Oxidation Induction Time (OIT) (1)	Minimum twice a year, per supplier of raw material on the pipe and on the raw material
Ring stiffness (Just BD)	Once per year

(1) If the raw material is the same for pipes and fittings, the OIT test must only be carried out in one of them.

TABLE 4 - FITTINGS

TEST	GRANTING/ MAINTANING
Appearance	Every 4 h per injection line or in case of dimensional changes
Mean outside diameter	
Wall thickness of the body and socket	
Lenght of the sockets	
Effects of heating	Every 6 months, per raw material
Melt mass flow rate (MFR) (compound + fitting)	Every 6 months, per raw material
Oxidation Induction Time (OIT) (1)	Every 6 months, per raw material
Watertightness (2)	Once per year/type of joint
Air tightness (2)	
Elevated temperature cycling	
Leaktighness of the joint with elastomeric seal (Just BD)	
Resistance to internal pressure 165h-80°C (Just BD)	

(1) If the raw material is the same for pipes and fittings, the OIT test must only be carried out in one of them.

(2) Not required for butt fusion joints.

5 Marking of certified products

5.1 Marking of the pipes

The marking of the pipes will be carried out every meter. The minimum required marking of the pipe is the following:

- The word AENOR;
- N Mark logotype;
- Product certificate number: 001/XXXX;
- The applicable standard SANS 8770 and/or UNE-EN 1519;
- Manufacturer identification, trademark;
- Material (PE);
- Nominal size;
- Minimum wall thickness;
- Type of socket;
- Application area code;
- Manufacturer's information (production period: year and month in figures or in code).

5.2 Marking of the fittings

The minimum required marking of the fitting is the following:

- The word AENOR;
- N Mark logotype;
- Product certificate number: 001/XXXX;
- The applicable standard SANS 8770 and/or UNE-EN 1519;
- Manufacturer identification, trademark;
- Nominal size;
- Minimum wall thickness;

— Nominal angle;

— Material (PE);

— Type of socket;

— Manufacturer's information (production period: year and month in figures or in code).

All the reference to AENOR, N Mark logotype and certificate number can be given in the form of a label affixed to the fitting or package.

Annex C1

Descriptive Questionnaire for Pipes

CLIENT:

MANUFACTURER COMPANY:

FACTORY SITE:

STANDARD:

TRADEMARK(S):

DATE:

MATERIAL (TYPE):

SERIES	DIAMETERS

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

…….…… on …… of …… 20……

SIGNATURE AND STAMP OF THE MANUFACTURER

Annex C2

Descriptive Questionnaire for fittings

CLIENT:

MANUFACTURER COMPANY:

FACTORY SITE:

STANDARD:

TRADE MARK(S):

MATERIAL (TYPE):

DATE:

Please list all the fittings to be included in the scope of the certification:

FIGURE	DIAMETERS	INTERNAL REFERENCE OF THE MANUFACTURER	NOMINAL ANGLE

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

…….…… on …… of …… 20……

SIGNATURE AND STAMP OF THE MANUFACTURER