

AENOR Mark Specific Rules for plastics polyethylene (PE) fittings for water supply, and for drainage and sewerage under pressure

Note: This document is a translation of the Spanish document "RP . 01.70 rev 1" approved by the Plastics Technical Certification Committee (CTC-001). Spanish version always prevails over this translation.

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1 Purpose and scope

Pursuant to paragraph 3.2 of the General Rules on the Certification of Products and Services, hereafter the General Rules, the present Specific Rules describe the specific certification scheme for plastics polyethylene (PE) fittings to be used for water supply intended for human consumption, including the conveyance of raw material prior to treatment, drainage and sewerage under pressure, vacuum sewer systems, and water for other purposes. The present Specific Rules complete the AENOR Mark Specific Rules for plastic materials – common requirements (RP 01.00).

The General Rules always prevail over the present Specific Rules.

The AENOR Mark for plastics polyethylene (PE) fittings to be used for water supply intended for human consumption, including the conveyance of raw material prior to treatment, drainage and sewerage under pressure, vacuum sewer systems, and water for other purposes, hereafter the Mark, denotes product compliance with the UNE EN 12201-1:2012 and UNE-EN 12201-3:2012 standard.

2 Definitions and special requirements

Class: It is called a class of fittings to the set of the same ones that have the same nominal dimensions and forms.

Type: The following types are established:

Fusion fittings:

- Butt fusion fittings,
- Electrofusion fittings,
- Socket fusion fittings

Mechanical fittings:

- Compression fittings,
- Flanged fittings

Manipulated fittings

Intended application:

- W For fittings intended for the conveyance of water for human consumption
- P For fittings intended for sewer and drainage under pressure
- W+P For both of the above applications

At the same time, for polyethylene(PE) fittings for water supply intended for human consumption, pending the adoption of the European criterion of verification of the effect on water quality of these products, the licensee will provide to AENOR Technical Services, during the inspection visit, that he has evidences that his product complies with RD 140/2003. Therefore, his product does not contain any of the substances listed in Annex 1 of the mentioned document.

3 Sampling and testing for granting and maintaining the AENOR product certificate

3.1 Test to be carried out in factory (See RP 01.00)

AENOR Services will carry out the test indicated in table 1, for each type where required, during the initial or surveillance inspection.

3.2 Sampling and tests to be carried by the laboratory (See RP 01.00)

AENOR services will select and marked the necessary samples to carry out in the laboratory the tests stated in table 1, for each type, as proceed.

	TESTS	GRANTING/MAINTAINING	RESULTS EVALUATION (*)
TESTS TO BE CARRIED OUT BY THE INSPECTOR IN THE FACTORY	Appearance and design	1 fitting per diameter	1
	Nominal outside diameter	1 fitting per diameter	2
	Wall thickness	1 fitting per diameter	3
	Ovality	1 fitting per diameter	1
	Mean inside diameter	1 fitting per diameter	2
	Minimum bore	1 fitting per diameter	1
	Length(L1min, L1 max, L2min)	1 fitting per diameter	1
	Electrical characteristic for electrofusion fittings	1 fitting per diameter	1
	High (H)	According to the manufacturer specification	1
TESTS TO BE CARRIED OUT BY THE LABORATORY	Melt flow rate	1 fitting randomly per raw material	1
	Oxidation induction time	1 fitting randomly per raw material	4
	Hydrostatic strength 20°C 100 h	20 % of diameters Minimum 2 Maximum 5	1
	Hydrostatic strength 80°C 165 h	20 % of diameters Minimum 2 Maximum 5	1
	Hydrostatic strength 80°C 1000 h	1 class	1
	Tensile strenght for butt fussion fittings	2 fittings randomly	1
	Impact resistance of tapping tees	1 fitting randomly	1
	Decohesive resistance (only electrofusion)	2 fittings randomly	1

TABLE 1

(*) The evaluation criterion of this table are described in section 7.6, evaluation test results, of R 01.00 .

NOTE (1): For the assembly of mechanical tests, it will have the correspondent instructions for each manufacturer. The manufacturer will provide the pipes for the mentioned tests. It will allow that the manufacturer send to the laboratory the assembly. In case that requires it because it considers to be necessary, the applicant/licensee will send the competent professional technical staff to carry out the assembly requires for the realization of the tests.

4 Manufacturer internal control

4.1 Characteristics under factory production control

All the characteristics under factory production control stated in this paragraph are referred for each type of polyethylene fittings.

Raw materials: when the raw material does not possess the certificate AENOR of product, the manufacturer must ensure that the mixtures and compounds involved in the manufacture of fittings having appropriate characteristics. In the same way, the specifications provided in the Certificate of Analysis of material received, comply with established purchase requirements.

Manufacturing controls: Tests and their frequency are stated in table 2.

Final product controls: Tests and their frequency are stated in table 2.

TEST	FREQUENCY
Appearance and design	Every 4 h per injection line or in case of dimensional changes
Nominal outside diameter	
Wall thickness	
Length (L1min, L1max, L2min)	
Ovality	
Mean inside diameter	
Minimum bore	
Electrical characteristic for electrofusion fittings	
High (H)	According to the manufacturer specification
Melt flow rate	Per period of manufacture. Minimum every week
Oxidation induction time	Every 6 months, per supplier of raw material
Hydrostatic strength a 20° 100 h	1 reference per year and in case of geometrical piece changes, or in case of material reference changes or raw material supplier changes.
Hydrostatic strength 80°C 165 h	Per period of manufacture
Hydrostatic strength 80°C 1000 h	In case of design changes or raw material changes
Tensile strength for but fusion fittings	1 reference per year and in case of geometrical piece changes, or in case of material reference changes or raw material supplier changes.
Impact resistance of tapping tees	1 reference per year and in case of geometrical piece changes, or in case of material reference changes or raw material supplier changes.
Decohesive resistance (only electrofusion)	1 reference per year and in case of geometrical piece changes, or in case of material reference changes or raw material supplier changes.

TABLE 2


5 Marking of certified products (See RP 01.00)

The minimum required marking on the fitting is as follows:

- Trademark;
- Nominal outside diameter of pipe and design application series/SDR
- Manufacturer's information
- Applicable SDR fusion range *
- Material and designation *

**This information may be printed on a label associated with the fitting or on an individual bag*

The minimum required marking of the fitting packaging is as follows:

- Reference to the word: AENOR
-  (AENOR logotype) with a size not less than 3 mm
- Number of contract signed with AENOR: 001/XXX;
- reference to the applicable standard UNE EN 12201-3;
- material and designation
- Nominal pressure (in bar)
- tolerance (only for spigot fittings $dn \geq 280\text{mm}$)
- applicable SDR fusion range
- intended application

Annex C-2: Descriptive Questionnaire for PE fittings

APPLICANT COMPANY:

MANUFACTURER COMPANY:

FACTORY SITE:

PRODUCT:

MATERIAL:

TYPE OF FITTINGS:

Fusion fittings

Mechanical fittings

Manipulated fittings

Butt fusion

Compression

Electrofusion

Flanged

Socket fusion

STANDARD:

TRADE MARK(S):

DATE:

THE APPLICANT SHALL FILL IN A QUESTIONNAIRE FOR EACH FITTING TYPE

FIGURE	REFERENCE <small>(INTERNAL REF. OF MANUFACTURER)</small>	DIAMETERS	NOMINAL PRESSURE (PN) OR SDR

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

STAMP OF THE MANUFACTURER

