AENOR

AENOR ⵏ Mark Specific Rules for mechanical-joint compression fittings for use with polyethylene pressure pipes in water supply systems

Note: This document is a translation of the "RP 001.86 rev 0" in Spanish approved by the Plastics Technical Certification Committee (CTC-001). Spanish version always prevails over this translation.

RP 001.86

Revision 0

Date 2018-01-30

AENOR

Index

1 Purpose and scope

These specific rules describes, in compliance with section 3.2 of the General rules for the AENOR Certification of Products and Services, hereafter the General Rules, the specific rules for mechanical-joint compression fittings for use with polyethylene pressure pipes in water supply systems. 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 mechanical-joint compression fittings for use with polyethylene pressure pipes in water supply systems, hereafter the Mark, denotes product compliance with the standard SANS 14236:2000.

2 Definitions and special requirements

Serie: It is consider as the set of fittings produced for the same nominal pressure

Base material: Is the material of the body

Reference: it is consider a reference the set of fittings that have the same nominal dimensions and shape

Through the application of this Specific Rules, it is possible to obtain de AENOR certification for mechanical fittings classified as follow:

According to the connecting system

- **Type 1:** external grip fittings (compression-type fittings) which grip the pipe only at its outer surface.
- **Type 2:** internal/external-grip fittings, which grip nor support the pipe both at the inner and outer surface of the pipe.

According to the resistance of the fitting to the longitudinal force

- **Class 1:** end-load-bearing compression fittings.
- **Class 2:** Non-end-load-bearing compression fittings.

The applicant must indicate the type of polyethylene pipe for which the fittings are intended (PE 40, PE 80 or PE 100) and nominal pressure of the pipes.

Mechanical plastic fittings included in the scope of this specific rules, will comply with the RD 140/2003 Transposition of Community Directive 98/83/CE through migration tests according to UNE-EN 12873-1 Standard, performed every five years.

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)

During initial or surveillance inspection, AENOR Services will carry out the test indicated in table 1.

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

AENOR Services will select and marked the necessary samples to carry out in the laboratory the test indicated in table 1 per material base of the fitting, per type of polyethylene pipes and nominal pressure.

The manufacturer will send the selected samples to the laboratories indicated by the AENOR services, within 7 days since the date of the inspection.

TABLE 1

	TEST	GRANTING/ MAINTANING	RESULTS EVALUATION
TESTS TO BE CARRIED OUT BY THE LABORATORY	Appearance	10 fittings randomly	1
	Opacity	1 reference randomly	1
	Verification of long-term behaviour (Note 1, just for plastic fittings)	Type test	1
	Resistance to internal pressure 20º 1 hour (Just for plastic fittings)	1 reference of the 50% of the diameters / máx. 4	1
	Resistance to internal pressure 20°C, or 95º, or 60º or 70º C 1000 h (Just for plastic fittings)	1 reference randomly	1
	Crushing tests (Just for PVC-U fittings)	1 reference randomly	1
	Leaktightness under internal pressure when subjected to bending	1 reference of the 50% of the diameters / máx. 4	1
	Resistance to pull out (Just for class 1)	1 reference of the 50% of the diameters / máx. 4	1
	Leaktightness under internal vacuum	1 reference of the 50% of the diameters / máx. 4	1
	Leaktightness of assembled joints	Type test	1

Note (1) The long term behaviour of the material of the fitting body shall be verified in a type test on an injection-moulded pipe specimen with an outside diameter of not less than 50 mm produced with the same material as that of the body fitting body. The wall thickness of the specimen shall not be less than of a PN 6 pipe and not more than that of a PN 16 pipe of the corresponding size and of the same material. When the specimen is pressure-tested shall comply with table 8 from the standard ISO 14236.

4 Manufacturer internal control

4.1 Raw materials for fittings

The manufacturer must guarantee that the mixtures, compounds and alloys involved in the manufacture of the fittings have appropriate characteristics. In addition, will assure that the specifications provided in the Certificate of Analysis, comply with the purchase requirements established and that these are the compounds and alloys declared in the application forms of as raw materials.

For metallic fittings or metallic insertions, brass parts must comply with the alloys included in the standards:

- Fittings for machining: UNE EN 12164 Rod for free machining
- Fittings for forging: UNE EN 12165 Semiproducts for forge
- Fittings manufactured from hollow bars: UNE EN 12168 Hollow Bars for machining
- Ingots and casting: UNE EN 1982

Temporarily, and while new revisions of European standards with respect to copper alloys for brass fittings are published, the alloys listed in the following document are allowed: "Common Approach. Metallic materials part B: Common composition 4MS list".

https://www.umweltbundesamt.de/sites/default/files/medien/374/dokumente/150120_4ms_scheme_for_metallic_materials_part_b.pdf

4.2 Final products control

Tests and their frequency are stated in table 2 as proceed 2 per material base of the fitting, per type of polyethylene pipes and nominal pressure.

TABLE 2

TEST	FREQUENCY
Appearance	According to the manufacturer´s internal procedure
Opacity	1 reference per year
Verification of long-term behaviour (Note 1, just for plastic fittings)	Type test
Resistance to internal pressure 20º 1 hour (Just for plastic fittings)	Once per month
Resistance to internal pressure 20°C, or 95º, or 60º or 70º C 1000 h (Just for plastic fittings)	Once per month
Crushing tests (Just for PVC-U fittings)	Once per year
Leaktightness under internal pressure when subjected to bending	Per manufacturing period
Resistance to pull out (Just for class 1)	Once per month per diameter
Leaktightness under internal vacuum	Once per month per diameter
Leaktightness of assembled joints	Every 4 months

Note (1) The long term behaviour of the material of the fitting body shall be verified in a type test on an injection-moulded pipe specimen with an outside diameter of not less than 50 mm produced with the same material as that of the body fitting body. The wall thickness of the specimen shall not be less than of a PN 6 pipe and not more than that of a PN 16 pipe of the corresponding size and of the same material. When the specimen is pressure-tested shall comply with table 8 from the standard ISO 14236.

5 Marking of certified products

5.1 Marking of the fittings

The minimum required marking of the fitting is the following:

- The word AENOR;
- AENOR Mark logotype ;
- Number of the contract signed with AENOR: 001/XXX;
- Manufacturer identification, trademark;
- Type of fitting-body material;
- Nominal outside diameter of the pipe for which the fitting is intended;
- Nominal pressure;

- Nominal diameter of the thread, if apply;
- Manufacturing code (plastic fittings).

The manufacture´s name or trademark, Nominal outside diameter of the pipe, the nominal pressure of the fitting, and the nominal diameter of the thread shall be printed or embossed when marked on the fitting. Additional information may be given in the form of a label affixed to the fitting or package.

AENOR

Annex C-1

Descriptive Questionnaire for fittings

APPLICANT COMPANY (HOLDER OF THE CERTIFICATE):

MANUFACTURER COMPANY:

FACTORY SITE:

TYPE OF FITTING-BODY MATERIAL:

TYPE OF PIPE FOR WHICH THE FITTING IS INTENDED:

STANDARD:

TRADE MARK(S):

DATE:

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

FIGURE	DIAMETERS	INTERNAL REFERENCE OF THE MANUFACTURER	NOMINAL OUTSIDE DIAMETER OF THE PIPE	NOMINAL PRESSURE

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

SIGNATURE AND STAMP OF THE MANUFACTURER