DD ISO/TS 19911:2010

BSI Standards Publication

Plastics pipes and fittings — Format of a technical file for characterizing PE spigot end fittings

National foreword

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According to the replies received by the end of the review period, the responsible BSI Committee will decide whether to support the conversion into an international Standard, to extend the life of the Technical Specification or to withdraw it. Comments should be sent to the Secretary of the responsible BSI Technical Committee at British Standards House, 389 Chiswick High Road, London W4 4AL.

The UK participation in its preparation was entrusted to Technical Committee PRI/88/4, Test Methods - Plastic Piping.

A list of organizations represented on this committee can be obtained on request to its secretary.

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ISO/TS 19911 was prepared by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 5, *General properties of pipes, fittings and valves of plastic materials and their accessories — Test methods and basic specifications*.

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Introduction

The technical file of a spigot end fitting describes the identification of the fitting, the main characteristics of the PE compound and the geometrical characteristics of the fitting, including the manufacturing tolerances of the product.

The technical file can be used to characterize the fitting for type testing and approval by third party certification procedures. Each modification on the fitting is reflected can be a revised technical file. Based on the contents of the revised technical file, further approval or complementary testing can be considered.

Plastics pipes and fittings — Format of a technical file for characterizing PE spigot end fittings

1 Scope

This Technical Specification describes the individual elements of a technical file, specifying the characteristics of fittings with spigot ends for butt fusion or electrofusion assembling.

All details described in this Technical Specification are provided by the manufacturer of the butt fusion fitting.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references only the edition cited applies. For undated references the latest edition of the referenced document (including any amendments) applies.

ISO 1133, *Plastics — Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics*

ISO 12162, *Thermoplastics materials for pipes and fittings for pressure applications — Classification, designation and design coefficient*

ISO 12176-4, *Plastics pipes and fittings — Equipment for fusion jointing polyethylene systems — Part 4: Traceability coding*

3 Description of the spigot end fitting

The manufacturer's technical file shall include the information, as described in Tables 1 and 2, for the identification of the fitting and the PE compound used.

Table 1 — Identification of the fitting

Name of the manufacturer	
Trade mark of the fitting	
Type of fitting (tee, elbow, reducer, etc.)	
Application, e.g. water and gas	
Detailed explanation of the identification coding of the fitting	
Nominal diameter(s) and SDR	
Compliance with product standard(s)	

Table 2 — Characteristics of the PE compound

Trade mark	
Classification of compound in accordance with ISO 12162, e.g. PE100	
Compound code in accordance with ISO 12176-4	
Melt mass-flow rate, e.g. MFR(190/5) indicating temperature and load used in the test, in accordance with ISO 1133, of the compound and tolerances, if not provided by the product standard	
Colour of the compound	

4 Geometrical characteristics of the fitting

The manufacturer's technical file shall provide all relevant dimensions in millimetres. At a minimum, the dimensions related to the symbols shown in Figure 1 and Table 3 shall be provided.

The dimensions used in Table 3 are in conformity with the relevant product standard.

The dimensions shown in Figure 1 and Table 3 are the following:

D_1 the mean outside diameter of the fusion end-piece, measured in any plane parallel to the plane of the mouth and at a distance not greater than L_2 from that plane;

D_2 the mean outside diameter of the body of the fitting;

D_3 the minimum bore which comprises the minimum diameter of the flow channel through the body of the fitting. This diameter does not include the fusion bead if any;

E the thickness of the fitting measured at any point on the wall of the fitting;

E_s the thickness of the fusion-face wall, measured at any point at a maximum distance, L_1 (cut-back length) from the mouth;

L_1 the length of the cut-back section of the fusion end-piece, which comprises the initial depth of the spigot and which is necessary for butt fusion or electrofusion;

L_2 the tubular length, which comprises the length of the initial, tubular, section of the fusion end-piece;

L overall dimensions of the fitting defined by the manufacturer;

Ovality out-of-roundness (ovality) of D_1 measured at any point of L_1

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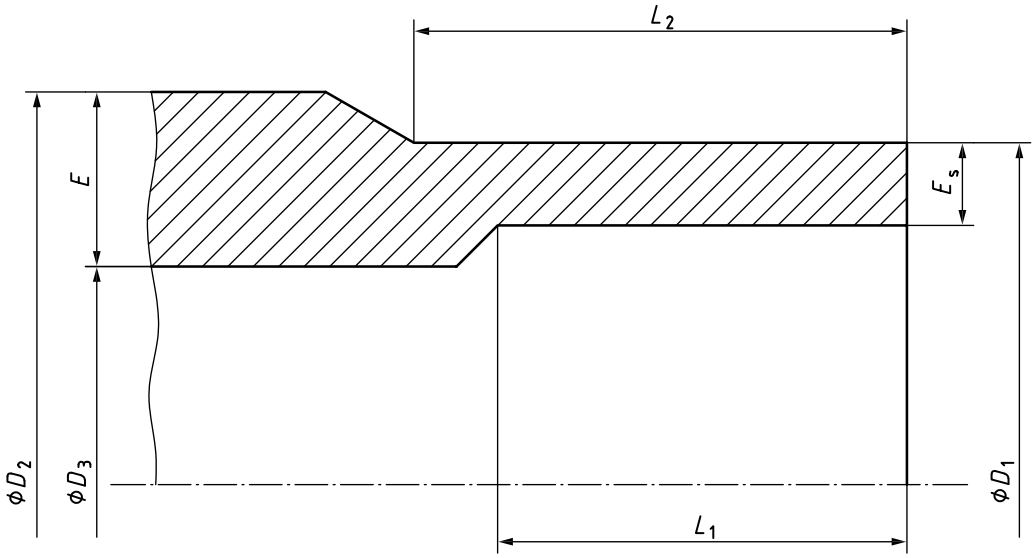

Figure 1 — Geometrical characteristics of the spigot end fitting

Table 3 — Dimensions and tolerances

Dimension	Unit	Nominal	Minimum	Maximum
D_1[a]	mm			
D_2	mm			
D_3	mm			
E	mm			
E_s[b]	mm			
L_1	mm			
L_2	mm			
L	mm			
Ovality (D_1)[a]	mm			

[a] These values conform to the product standard or specification.

[b] Face thickness reductions due to chamfering of the edge or circumferential reversion when made out of pipe shall be included.

The white areas of Table 3 are to be completed.

5 Fusion parameters

If required, the manufacturer may provide a butt fusion procedure with the technical file.

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