INTERNATIONAL STANDARD

ISO 4065

Second edition
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Thermoplastics pipes — Universal wall thickness table

Tubes en matières thermoplastiques — Tableau universel des épaisseurs de paroi

Reference number
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 4065 was prepared by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids.*

This second edition cancels and replaces the first edition (ISO 4065:1978), which has been technically revised.

The aim of the first edition was to identify a series of standard wall thicknesses for thermoplastics pipes as a means of controlling the wide variety of wall thicknesses which might otherwise be produced. The revision of this document has resulted in a number of basic changes. The standard now provides a basis for establishing a series of wall thicknesses for use in the preparation of product standards. However, it is not regarded as providing an exclusive list of wall thicknesses, as there may be occasions when specific applications require other wall thicknesses to take into account additional factors such as stiffness or temperature conditions.

Annex A of this International Standard is for information only.

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Thermoplastics pipes — Universal wall thickness table

1 Scope

This International Standard specifies the relationship between the nominal wall thickness e_n and the nominal outside diameter d_n of thermoplastics pipes.

It is applicable to smooth thermoplastics pipes of constant circular cross-section along the whole length of the pipe, whatever their method of manufacture, their composition or their intended application.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 3:1973, *Preferred numbers — Series of preferred numbers.*

3 Definitions

For the purposes of this International Standard, the following definitions apply.

3.1 nominal outside diameter, d_n: A numerical designation of size which is common to all components in a thermoplastics piping system other than flanges and components designated by thread size. It is a convenient round number for reference purposes.

NOTE 1 For metric pipe series conforming to ISO 161-1[1] (see annex A), the nominal outside diameters, expressed in millimetres, are the minimum mean outside diameters $d_{em,min}$ in the applicable standard for pipe.

3.2 mean outside diameter, d_{em}: The measured length of the outer circumference of the pipe divided by π [1], rounded to the next higher 0,1 mm.

3.3 wall thickness at any point, e_y: The measured wall thickness at any point around the circumference of the pipe, rounded to the next higher 0,1 mm.

3.4 nominal wall thickness, e_n: A wall thickness tabulated in this International Standard, and identical to the minimum permissible wall thickness at any point, $e_{y,min}$.

3.5 standard dimension ratio, SDR: The ratio of the nominal outside diameter d_n of a pipe to its nominal wall thickness e_n.

NOTE 2 This value may also be derived from the equation given in 3.6.

3.6 pipe series, S: A dimensionless number related to the nominal outside diameter d_n and nominal wall thickness e_n, the value of which is as specified in the tables in this International Standard.

The pipe series number S is given by the following equation:

$$S = \frac{SDR - 1}{2}$$

1) The value of π is taken to be 3,142.