INTERNATIONAL STANDARD

ISO 161-1

Fourth edition
2018-01

AMENDMENT 1
2023-04

Thermoplastics pipes for the conveyance of fluids — Nominal outside diameters and nominal pressures —

Part 1: **Metric series**

AMENDMENT 1

Tubes en matières thermoplastiques pour le transport des fluides — Diamètres extérieurs nominaux et pressions nominales —

Partie 1: Série métrique

AMENDEMENT 1

Reference number
ISO 161-1:2018/Amd.1:2023(E)

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

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

A list of all parts in the ISO 161 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Thermoplastics pipes for the conveyance of fluids — Nominal outside diameters and nominal pressures —

Part 1: Metric series

AMENDMENT 1

Terms and definitions

Replace entry 3.5 with the following:

3.5
minimum required strength
MRS
value of the lower confidence limit, σ_{LPL}, at 20 °C and 50 years, rounded down to the next value in the R 10 series when σ_{LPL} is less than 10 MPa or down to the next value in the R 20 series when σ_{LPL} is greater than or equal to 10 MPa.

Note 1 to entry: The minimum required strength is expressed in megapascals.

Note 2 to entry: The R 10 series and the R 20 series conform to ISO 3.

Clause 4

Replace Clause 4 with the following:

4 Nominal outside diameter, d_n

The nominal outside diameter, d_n, shall be selected from the values given in Table 1.

Table 1 — Values of nominal outside diameters, d_n

Dimensions in millimetres

2,5	10	40	125	250	500	1 000	2 250
3	12	50	140	280	560	1 200	2 500
4	16	63	160	315	630	1 400	2 800
5	20	75	180	355	710	1 600	3 000
6	25	90	200	400	800	1 800	
8	32	110	225	450	900	2 000	

Clause 6

Replace Clause 6 with the following:

6 Minimum required strength (MRS)

The MRS shall be selected from the values given in Table 3.

Table 3 — Values of minimum required strength (MRS)

Values in megapascals

1	8	25
1,25	10	28
1,6	11,2	31,5
2	12,5	35,5
2,5	14	40
3,15	16	45
4	18	50
5	20	
6.3	22,4	
NOTE The steps between the values from 1 to 10 are based on the R 10 series given in ISO 3 (25 % increments) whilst the steps between the values greater than 10 are based on the R 20 series (12 % increments).		

Bibliography

Remove entry [1] from the Bibliography (ISO 497) and renumber entry [2] as follows:

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