

ISO 15494:2015-10 (E)

Plastics piping systems for industrial applications - Polybutene (PB), polyethylene (PE), polyethylene of raised temperature resistance (PE-RT), crosslinked polyethylene (PE-X), polypropylene (PP) - Metric series for specifications for components and the system

Contents		Page
Foreword		v
Introduction		vi
1	Scope	1
2	Normative references	2
3	Terms and definitions	4
3.1	Geometrical definitions	4
3.2	Material definitions	5
3.3	Definitions related to material characteristics	6
3.4	Definitions related to service conditions	6
4	Symbols and abbreviated terms	7
4.1	Symbols	7
4.2	Abbreviated terms	8
5	Material	9
5.1	General	9
5.2	Hydrostatic strength properties	9
5.3	Material characteristics	9
5.4	Reprocessible and recyclable material	9
5.5	Materials for components not made from PB, PE, PE-RT, PE-X, or PP	9
5.5.1	General	9
5.5.2	Metallic materials	10
5.5.3	Sealing materials	10
5.5.4	Other materials	10
6	General characteristics	10
6.1	Appearance	10
6.2	Colour	10
6.3	Influence of UV radiation	10
7	Geometrical characteristics	10
7.1	General	10
7.2	Mean outside diameters, out-of-roundness (ovality), and tolerances	11
7.3	Wall thicknesses and related tolerances	11
7.4	Angles	11
7.5	Laying lengths	11
7.6	Threads	11
7.7	Mechanical fittings	11
7.8	Joint dimensions of valves	11
8	Mechanical characteristics	11
8.1	Resistance to internal pressure of components	11
8.2	Calculation of the test pressure for components	12
8.2.1	Pipes	12

8.2.2	Fittings	12
8.2.3	Valves	12
8.2.4	Resistance to rapid crack propagation, RCP	12
9	Physical characteristics	12
10	Chemical characteristics	13
10.1	Effects on the component material(s)	13
10.2	Effects on the fluids	13
11	Electrical characteristics	13
12	Performance requirements	13
12.1	General	13
12.2	Fusion compatibility	13
13	Classification of components	13
14	Design and installation	14
15	Declaration of conformity	14
16	Marking	14
16.1	General	14
16.2	Minimum required marking of pipes	14
16.3	Minimum required marking of fittings	15
16.4	Minimum required marking of valves	15
Annex A (normative) Specific characteristics and requirements for industrial piping systems made from polybutene (PB)		16
Annex B (normative) Specific characteristics and requirements for industrial piping systems made from polyethylene (PE)		29
Annex C (normative) Specific characteristics and requirements for industrial piping systems made from polyethylene of raised temperature resistance (PE-RT)		56
Annex D (normative) Specific characteristics and requirements for industrial piping systems made from crosslinked polyethylene (PE-X)		63
Annex E (normative) Specific characteristics and requirements for industrial piping systems made from polypropylene (PP)		73
Annex F (informative) Design and installation		99
Bibliography		100