

DIN EN 14636-1:2010-04 (E)

Plastics piping systems for non-pressure drainage and sewerage - Polyester resin concrete (PRC) - Part 1: Pipes and fittings with flexible joints

Contents		Page
Foreword		5
1	Scope	6
2	Normative references	6
3	Terms, definitions, symbols and abbreviations	7
3.1	Terms and definitions	7
3.2	Symbols and abbreviations	10
4	General requirements	14
4.1	Materials	14
4.2	Appearance	14
4.3	Reference conditions for testing	14
4.4	Joints	15
5	Pipes	16
5.1	Classification	16
5.2	Designation	16
5.3	Geometrical characteristics	17
5.4	Mechanical characteristics	26
5.5	Marking of pipes	30
6	Fittings	30
6.1	General	30
6.2	Bends	31
6.3	Branches	34
6.4	Marking of fittings	36
7	Joint performance	36
7.1	General	36
7.2	Requirements	36
8	Dangerous substances	39
9	Manufacturer's installation recommendations	39
10	Evaluation of conformity	39
10.1	General	39
10.2	Initial type testing	40
10.3	Factory production control (FPC)	43
10.4	One-off products, pre-production products (e.g. prototypes) and products produced in very low quantities	46
Annex A (normative)	Determination of a pipe's crushing strength and ring bending tensile strength using a pipe test piece	47
A.1	Scope	47
A.2	Principle	47
A.3	Apparatus	47
A.4	Test pieces	51

A.5	Procedure	51
A.6	Calculations	51
A.7	Test report	54
Annex B (normative) Determination of a pipe's crushing strength or the ring bending tensile strength using test pieces sawn from a pipe		55
B.1	Scope	55
B.2	Principle	55
B.3	Apparatus	55
B.4	Test piece	56
B.5	Test procedure	57
B.6	Calculations	59
B.7	Test report	60
Annex C (normative) Assessment of longitudinal bending moment resistance (BMR)		61
C.1	Scope	61
C.2	Principle	61
C.3	Apparatus	61
C.4	Procedure	63
C.5	Calculations	64
C.6	Test report	65
Annex D (normative) Determination of the compressive strength of polyester resin concrete (PRC) using test pieces which are cut from a pipe		66
D.1	Scope	66
D.2	Principle	66
D.3	Apparatus	66
D.4	Test pieces	68
D.5	Procedure	68
D.6	Calculations	68
D.7	Test report	68
Annex E (normative) Determination of the fatigue strength of a pipe under cyclic loading		69
E.1	Scope	69
E.2	Principle	69
E.3	Apparatus	69
E.4	Test pieces	70
E.5	Procedure	71
E.6	Calculations	71
E.7	Test report	72
Annex F (normative) Assessment of the leak-tightness of a pipe and its joints under short term exposure to internal water pressure		74
F.1	Scope	74
F.2	Principle	74
F.3	Apparatus	74
F.4	Procedure	74
F.5	Test report	75
Annex G (normative) Determination of the long-term crushing strength of a pipe, including the effects of media attack, using the 50 years reference point		76
G.1	Scope	76
G.2	Principle	76
G.3	Apparatus	76
G.4	Test pieces	77
G.5	Test solutions	78

G.6 Procedure 78
G.7 Evaluation - Long-term (50 years) crushing strength 79
G.8 Test report 79
Bibliography 80