

# DIN EN 13476-3:2020-12 (E)

Plastics piping systems for non-pressure underground drainage and sewerage - Structured-wall piping systems of unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) - Part 3: Specifications for pipes and fittings with smooth internal and profiled external surface and the system, Type B (includes Amendment A1:2020)

---

<b>Contents</b>	<b>Page</b>
European foreword .....	4
Introduction .....	6
1 Scope .....	7
2 Normative references .....	7
3 Terms, definitions, symbols and abbreviations .....	10
3.1 Terms and definitions .....	10
3.2 Symbols .....	10
3.3 Abbreviations .....	10
4 Material .....	11
4.1 General .....	11
4.2 Unplasticized poly(vinyl chloride) (PVC-U) .....	11
4.3 Polypropylene (PP) .....	12
4.4 Polyethylene (PE) .....	14
4.5 Sealing rings .....	15
4.6 Fused or welded joints .....	16
4.7 Adhesives for PVC-U .....	16
5 Designation of wall constructions and examples of typical jointing methods .....	16
5.1 Wall constructions designated as Type B .....	16
5.2 Designation and design of joints .....	18
6 Appearance and colour .....	18
7 Geometrical characteristics .....	19
7.1 General .....	19
7.2 Dimensions .....	19
7.3 Types of fittings .....	25
7.4 Design length of fittings .....	25
8 Physical characteristics .....	25
8.1 Unplasticized poly(vinyl chloride) (PVC-U) .....	25
8.2 Polypropylene (PP) .....	27
8.3 Polyethylene (PE) .....	28
9 Mechanical characteristics .....	29
9.1 Mechanical characteristics of pipes .....	29
9.2 Mechanical characteristics of fittings .....	32
10 Performance requirements .....	32
11 Marking .....	34
11.1 General .....	34

11.2	Minimum required marking .....	34
11.3	Additional marking .....	36
Annex A (normative) Compound / formulation PVC-U material .....		37
Annex B (normative) Utilization of non-virgin PVC-U material .....		38
B.1	Own reprocessed and recycled material from pipes and fittings .....	38
B.2	External reprocessed and recycled materials with agreed specifications .....	38
Annex C (normative) Compound / Formulation PP material .....		40
Annex D (normative) Utilization of non-virgin PP material .....		41
D.1	Own reprocessed material from pipes and fittings .....	41
D.2	External reprocessed and recycled materials with an agreed specification .....	41
Annex E (normative) Compound / Formulation PE material .....		43
Annex F (normative) Utilization of non-virgin PE material .....		44
F.1	Own reprocessed material from pipes and fittings .....	44
F.2	External reprocessed and recycled materials with an agreed specification .....	44
F.3	External reprocessed and recycled material from PE rotational-moulded fittings and other components .....	44
Annex G (normative) Impact test at 23 °C .....		46
Annex H (normative) Impact test at -10 °C .....		47
Annex I (normative) Ring flexibility test at 20 % diametric deflection .....		48
Annex J (informative) Survey of possible use of reprocessed and recycled material .....		49
Annex K (normative) Impact test for large diameter pipes with structured wall .....		50
K.1	Principle .....	50
K.2	Apparatus .....	50
K.3	Test samples .....	51
K.4	Conditioning .....	51
K.5	Procedure .....	51
K.6	Test result .....	52
Bibliography .....		53