

DIN EN ISO 11296-3:2019-05 (E)

Plastics piping systems for renovation of underground non-pressure drainage and sewerage networks - Part 3: Lining with close-fit pipes (ISO 11296-3:2018)

Contents	Page
European foreword	4
Foreword	5
Introduction	6
1 Scope	8
2 Normative references	8
3 Terms and definitions	9
3.1 General	9
3.2 Techniques	9
3.3 Characteristics	9
3.4 Materials	9
3.5 Product stages	9
3.6 Service conditions	9
3.7 Joints	10
4 Symbols and abbreviated terms	10
5 Pipes at the "M" stage	10
5.1 Materials	10
5.1.1 General	10
5.1.2 Distinction between PVC-U types	10
5.1.3 Virgin material	10
5.1.4 Reprocessable material and recyclable material	10
5.2 General characteristics	11
5.2.1 Appearance	11
5.2.2 Colour	11
5.3 Material characteristics	11
5.4 Geometric characteristics	12
5.5 Mechanical characteristics	12
5.6 Physical characteristics	12
5.7 Jointing	12
5.8 Marking	13
6 Fittings at the "M" stage	13
7 Ancillary components	13
8 Fitness for purpose of the installed lining system at the "I" stage	13
8.1 Materials	13
8.2 General characteristics	13
8.3 Material characteristics	13
8.4 Geometric characteristics	13
8.5 Mechanical characteristics	15
8.6 Physical characteristics	16
8.7 Additional characteristics	16
8.8 Sampling	16
9 Installation practice	16
9.1 Preparatory work	16
9.2 Storage, handling and transport of pipes and fittings	16

9.3	Equipment.....	16
9.3.1	Butt fusion equipment and debeading equipment.....	16
9.3.2	Reduction equipment.....	17
9.3.3	Pipe skids/rollers.....	17
9.3.4	Winching and rod-pulling equipment.....	17
9.3.5	Pipe entry guides.....	17
9.3.6	Reforming equipment.....	17
9.3.7	Electrofusion equipment.....	17
9.3.8	Inspection equipment.....	18
9.3.9	Lifting equipment.....	18
9.4	Installation.....	18
9.5	Process-related inspection and testing.....	19
9.6	Lining termination.....	19
9.7	Reconnection to existing manholes and laterals	19
9.8	Documentation	19
9.9	Final inspection and testing.....	19
	Annex A (normative) Factory-folded heat-reverted polyethylene (PE) pipe — Determination of memory ability	20
	Bibliography	22