AS 2439.1—2007

Australian Standard®

Perforated plastics drainage and effluent pipe and fittings

Part 1: Perforated drainage pipe and associated fittings

STANDARDS Australia

This Australian Standard® was prepared by Committee PL-021, PVC, ABS and Polyamide Pipe Systems. It was approved on behalf of the Council of Standards Australia on 9 March 2007.
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The following are represented on Committee PL-021:

- Australian Chamber of Commerce and Industry
- Australian Nuclear Science & Technology Organisation
- Certification Interests (Australia)
- CSIRO Manufacturing & Infrastructure Technology
- Energy Networks Association
- Engineers Australia
- Local Government New Zealand
- Master Plumbers, Gasfitters and Drainlayers New Zealand
- New Zealand Water & Waste Association
- Plastics Industry Pipe Association of Australia
- Plastics New Zealand
- Water Services Association of Australia

This Standard was issued in draft form for comment as DR 05546.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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Australian Standard®

Perforated plastics drainage and effluent pipe and fittings

Part 1: Perforated drainage pipe and associated fittings

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PREFACE

This Standard was prepared by the joint Standards Australia/Standards New Zealand Committee PL-021, PVC, ABS and Polyamide Pipe Systems to supersede AS 2439.1–1981.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard

This Standard is part of a series on perforated plastics drainage and effluent pipe and fittings, as follows:

AS	
2439	Perforated plastics drainage and effluent pipe and fittings
2439.1	Part 1: Perforated drainage pipe and associated fittings (this Standard)
2439.2	Part 2: Perforated effluent pipe and associated fittings for sewerage applications

The objective of this revision is to change the classification system for perforated drainage pipes. The performance of the pipes has not been altered but the manner in which the stiffness is designated has changed. The former stiffness classes 100, 200, 400 and 1000 have been replaced by stiffness classes SN2, SN4, SN8 and SN20 respectively. The SN classification is used in a range of Australian and International Standards for flexible pipes and the committee considered it appropriate to bring this Standard into line with the others.

This is a performance Standard and, therefore, all requirements and tests are related to end use. It is not the intention of the Standard to establish how strong the product is, but rather to determine if the product is strong enough to fulfil the desired function.

The requirements and tests contained in this Standard relate to field conditions as follows:

Bending—pipe is often bent at temperatures close to 0°C.

Straightening—coils are often unwound in cold conditions.

High-temperature impact resistance—pipe laid out in the hot sun must not be soft to the extent that it is damaged during backfilling.

Low-temperature impact resistance—pipe will not fail due to handling, fill material or degradation in service.

Pipe stiffness—pipe must be stiff enough to withstand the design loads after back-filling and settlement.

Elongation—pipe must not excessively elongate during installation.

Joint separation—joints must not separate when subjected to tensile forces induced when laying.

In the preparation of this Standard the committee gave consideration to the following documents:

ISO	TC 138/WG1-330—Draft Standard for Corrugated Polyethylene Drainage Tubing
ASTM F 405	Specification for Corrugated Polyethylene (PE) Tubing and Fittings
BS 4962	Specification for plastics pipes and fittings for use as subsoil field drains
DIN 1187	Unplasticized Polyvinyl Chloride (U-PVC); Dimensions, Requirements, Testing

Specifications used by the Roads and Traffic Authority, NSW

The term ‘normative’ has been used in this Standard to define the application of the appendix to which it applies. A ‘normative’ appendix is an integral part of a Standard.

Statements expressed in mandatory terms in notes to tables are deemed to be requirements of this Standard.

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies requirements for perforated plastics pipe and associated fittings designed for use in the drainage of surface and subsurface land, highway and building construction sites.

1.2 APPLICATION

Means for demonstrating compliance with this Standard shall be in accordance with Appendix A.

1.3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS
1199 Sampling procedures for inspection by attributes
1199.1 Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection

1327 Plastics—Standard atmospheres for conditioning and testing

AS/NZS
1254 PVC pipes and fittings for storm and surface water applications

1462 Methods of test for plastics pipes and fittings
1462.22 Method 22: Method for the determination of pipe stiffness

HB
18 Conformity assessment
18.28 Guide 28: Guidance on third-party certification system for products

1.4 DEFINITIONS

For the purpose of this Standard, the definitions given in AS/NZS 1254 apply.

1.5 TYPES

Perforated plastics drainage pipe shall be either one of the following:

(a) Type 1—Corrugated pipe.

(b) Type 2—Plain wall pipe.

1.6 CLASSIFICATION

Type 1 and Type 2 pipe shall be classified as SN2, SN4, SN8 or SN20.

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