AS 3518.2—1988

Australian Standard®

ACRYLONITRILE BUTADIENE STYRENE (ABS) PIPES AND FITTINGS FOR PRESSURE APPLICATIONS

Part 2—SOLVENT CEMENT FITTINGS

This Australian Standard was prepared by Committee PL/1, ABS Pipe Systems. It was approved on behalf of the Council of the Standards Association of Australia on 25 October 1987 and published on 4 January 1988.

The following interests are represented on Committee PL/1:

Australian Mining Industry Council
Australian Shippers Council
Council of Australian Food Technology Associations Incorporated
Department of Local Government Queensland
Electricity Commission of New South Wales
Electricity Supply Association of Australia
Engineering and Water Supply Department South Australia
Hunter District Water Board
Melbourne and Metropolitan Board of Works
Metropolitan Water Sewerage and Drainage Board, N.S.W.
Plastics Institute of Australia
Water Authority of Western Australia
Water Supply and Sewerage Department Queensland

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PREFACE

This Standard was prepared by the Association's Committee PL/1, ABS Pipe Systems, acting under the authority of the Plastics Standards Board, following a request from the Plastics Institute of Australia.

Most fittings used in ABS pipelines up to nominal size 200 mm are of solvent cement types, consequently this Standard initially covers only these fittings. Socket dimensions have been specified to ensure an interference fit between pipe and fitting.

Companion Standard AS 3518.1 specifies requirements for ABS pipes up to 200 mm nominal size.

A test is currently being developed to measure the effect of long term pressure cycling on plastics piping systems, and may be included in a future edition of this Standard.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

ACRYLONITRILE BUTADIENE STYRENE (ABS) PIPES AND FITTINGS FOR PRESSURE APPLICATIONS

PART 2—SOLVENT CEMENT PIPE FITTINGS

1 SCOPE. This Standard specifies requirements for moulded acrylonitrile butadiene styrene (ABS) fittings for solvent cement jointing to ABS pipes up to 200 mm nominal size complying with AS 3518.1.

2 REFERENCED DOCUMENTS. The following Standards are referred to in this Standard:

AS 1199	Sampling Procedures and Tables for Inspection by Attributes.
AS 1349	Bourdon Tube Pressure and Vacuum Gauges.
AS 1399	Guide to AS 1199, Sampling Procedures and Tables for Inspection by Attributes.
As 1821-AS 1823	Suppliers Quality Systems.
AS 1984	Vernier Callipers (Metric Series).
AS 2000	Guide to AS 1821-23, Suppliers Quality Systems.
AS 2070	Plastics Materials for Food Contact Use.
AS 2101	Internal Micrometers (including Stick Micrometers) (Metric Series).
AS 2102	External Micrometers (Metric Series).
AS 2490	Sampling Procedures and Charts for Inspection by Variables for Percent Defective.
AS 2831	Thermometers—Solid Stem—Long and Short—For Precision Use.
AS 3518.1	Acrylonitrile Butadiene Styrene (ABS) Pipes and Fittings for Pressure Applications Part 1—Pipes.
ISO 727	Fittings of Unplasticized Polyvinyl Chloride (PVC-U), Chlorinated Polyvinyl Chloride (PVC-C) or Acrylonitrile/ Butadiene/Styrene (ABS) with Plain Sockets for Pipes under Pressure—Dimensions of Sockets—Metric Series.

3 DEFINITIONS. For the purpose of this Standard, the definitions below apply.

3.1 Fitting—any component other than pipes or fixtures intended for connection to or installation in a pipeline, e.g. bend, connector, junction, trap, collar, socket, straight fitting, tap or valve.

3.2 Saddle—a shaped plate used to reinforce a pipe wall where a branch is to be connected.

3.3 ABS solvent cement—a solvent blend capable of softening the surface of ABS plastics for the purpose of jointing.

3.4 Solvent cemented joint—a joint made on certain types of plastics piping in which the contact surfaces are both coated with solvent cement. The joint is then made by pressing the softened surfaces together.

4 NOTATION. The following notation shall apply in this Standard:

DN = nominal size, in millimetres.

D_m = mean outside diameter, in millimetres.

D_i = socket mouth mean inside diameter, in millimetres.

D_r = socket root mean diameter, in millimetres.

L = socket length, in millimetres.

T = wall thickness, in millimetres.

NOTE: Nominal size, DN, for ABS pipe is based on the bore diameter.

5 CLASSIFICATION. Fittings shall be classified at a fitting material temperature of 20°C as follows:

Class 9 — for use with pipes with a maximum static working pressure up to 0.9 MPa.

Class 12— for use with pipes with a maximum static working pressure up to 1.2 MPa.

Class 15— for use with pipes with a maximum static working pressure up to 1.5 MPa.

NOTES:

1. Selection of class should be based on consideration of all factors which may affect the operation of the fitting, e.g. temperature of operation, fluctuating pressure, external loading, etc.
2. It is usual to manufacture each type of fitting with a single wall thickness appropriate to the maximum pressure class of pipe with which it is intended to be used.

6 EFFECT OF TEMPERATURE ON MAXIMUM WORKING PRESSURE. The reduction of maximum working pressure with increasing temperatures above 20°C shall be not less for the fitting and joint than that specified for ABS pipe in AS 3518.1.

7 COMPOSITION. Fittings shall be manufactured from material which complies with the requirements of Clause 7 of AS 3518.1.

NOTE: Statutory Authorities may require that the manufacturer disclose the composition of the fitting.