

Australian Standard[®]

**Solvent cement and priming
(cleaning) fluids for use with ABS
pipes and fittings**

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Electricity Commission of New South Wales
Engineering and Water Supply Department, S.A.
Hunter District Water Board
Melbourne and Metropolitan Board of Works
Plastics Institute of Australia
Water Authority of Western Australia
Water Board, Sydney
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PREFACE

This Standard was prepared by Standards Australia's Committee on ABS Pipe Systems, under the authority of the Plastics Standards Board

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STANDARDS AUSTRALIA

Australian Standard

Solvent cements and priming (cleaning) fluids for use with ABS pipes and fittings

1 SCOPE. This Standard sets out the requirements for solvent cement and priming (cleaning) fluids used in the jointing of acrylonitrile butadiene styrene (ABS) pipes and fittings, and in the fabrication of ABS fittings.

NOTES:

1. The recommended procedure for jointing ABS pipe systems using solvent cement is described in AS 3690.
2. Advisory information on the assessment of compliance with this Standard is given in Appendix A.

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

AS	
1199	Sampling procedures and table for inspection by attributes
1349	Bourdon tube pressure and vacuum gauges
1399	Guide to AS 1199, Sampling procedures and tables for inspection by attributes
1821-23	Supplier's Quality Systems
2000	Guide to AS 1821-23, Supplier's Quality Control Systems
2070	Plastics materials for food contact use
2070.4	Part 4: Acrylonitrile plastics materials
2070.6	Part 6: Colourants
2700	Colour Standards for general purposes
3518	Acrylonitrile butadiene styrene (ABS) pipes and fittings for pressure applications
3518.1	Part 1: Pipes
3518.2	Part 2: Solvents cement fittings
3690	Installation of ABS pipe systems
3900	Quality systems — Guide to selection and use
3901	Quality systems for design/development, production, installation and servicing
3902	Quality systems for production and installation
3903	Quality systems for final inspection and test
3904	Quality systems — Guide to quality management and quality system elements
BS	
6920	Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water

RAL

840 HR Colour register

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

3.1 Priming (cleaning) fluid—a fluid used for the removal of contaminants, e.g. dirt or grease from the jointing surfaces of the pipe and fitting.

3.2 Quality control test—a test carried out during or after manufacture to prove the quality of a production run.

3.3 Solvent cement—a solvent based fluid designed for the bonding of ABS pipes and fittings.

3.4 Type test—a test intended to prove the suitability and performance of a new composition, a new compounding or processing technique, or a new design.

4 GENERAL REQUIREMENTS FOR SOLVENT CEMENTS .

4.1 Freedom from defects, ease of application and wetting ability. Solvent cements shall form a uniform film, free from surface voids, when applied to a clean, dry ABS pipe surface by means of a clean soft brush. Solvent cements should be of such a viscosity as to allow a full and ample coating to be applied, and remain smooth and even.

Solvent cements shall not contain lumps or any foreign matter.

NOTE: These requirements cannot be completely quantified. Where the determination, presence, size or frequency of defects are considered to be of concern, arrangements should be made between the purchaser/approving authority/certifying body (as appropriate), and the manufacturer; the provision of acceptable type samples and methods of test may be required.

Where defects are present and the product is submitted for acceptance, fitness for purpose should be able to be demonstrated by the manufacturer.

4.2 Colour. Colours shall be as follows:

- (a) *Priming (cleaning) fluid*—Pink, but not lighter than colour R25 of AS 2700.
- (b) *Solvent cement*—grey, not lighter than colour N24 and not darker than colour N35 of AS 2700.

NOTES:

1. The above requirements apply within the period of the manufacturer's recommended storage life. Any phase separation or stratification that occurs during storage should be easily reversible by stirring.
2. Cement coloured to RAL 7001 is commonly used.

4.3 Effect on water. When used in a pipe joint in contact with potable water, dried solvent cement shall meet the test requirements of BS 6920, or other approved tests.

4.4 Food contact applications. When used in food contact applications, dried solvent cement shall be made only from materials complying with the requirements of AS 2070.4 and AS 2070.6.

5 TEST REQUIREMENTS FOR SOLVENT CEMENTS AND CEMENTED JOINTS.

NOTE: These requirements apply within the period of the manufacturer's recommended storage life.

5.1 Viscosity. When tested in accordance with Appendix B, the viscosity shall be in the range 0.6 Pa.s to 1.9 Pa.s.

5.2 Short-term shear strength. When tested in accordance with Appendix C the shear strength of the cemented joint shall be not less than 5.0 MPa, 168 h after the joints have been prepared.