AS 1741—1991
Reconfirmed 2018

Australian Standard®

Vitrified clay pipes and fittings with flexible joints—Sewer quality

This Australian Standard was prepared by Commitee WS/15, Vitrified Clay Pipes. It was approved on behalf of the Council of Standards Australia on 4 April 1991 and published on 12 July 1991.

The following interests are represented on Commitee WS/15:

Australian Clay Pipe Manufacturers Association

Board of Works, Melbourne

Department of Conservation and Environment, Victoria

Engineering and Water Supply Department, South Australia

Hunter Water Board

Public Works Department, New South Wales

Water Authority of Western Australia

Water Board, Sydney—Illawarra—Blue Mountains

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STANDARDS AUSTRALIA

RECONFIRMATION

OF
AS 1741–1991
Vitrified clay pipes and fittings with flexible joints–Sewer quality

RECONFIRMATION NOTICE

Major stakeholders of this publication have reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

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PREFACE

This Standard was prepared by the Standards Australia Committee on Vitrified Clay Pipes to supersede AS 1741—1975, *Vitrified clay pipes* and also to supersede AS 1693, *Rubber ring joints for vitrified clay pipes,* Part 1—1975: *100 mm diameter* and Part 2—1977: *150 mm diameter.*

The dimensional and performance requirements of the Standard are either superior to or equal to those of the 1975 edition. This has been achieved by smaller dimensional tolerances and either increased or additional performance criteria. These requirements are compatible with overseas Standards to ensure international acceptance of this Standard.

The principal changes in this edition are as follows:

(a) Inclusion of crushing strength class and crushing load instead of pipe class and ring loading and rationalization with Australian Standards for rigid pipes of other material.

(b) Inclusion of requirements for both socket and sleeve type flexible joints and dimensions for socket type to permit the interchange of production pipes and fittings from different manufacturers.

(c) Inclusion of an alternative flexural strength test, using bending moment resistance for nominal sizes DN 100 to DN 225, based on the three–point loading test of BS [illegible]:1988.

(d) Inclusion of test specimens, wetted by either immersion or internal hydrostatic pressure, for crushing and flexure strength tests.

(e) Inclusion of a significantly reduced allowable permeability for test pipes.

(f) Inclusion of a description, size and classification for twelve physical defects and a quantitative basis for the acceptance or rejection of production pipes and fittings.

(g) Inclusion of acid resistance test, based on BS 65:1988, to measure the degree of vitrification of the manufacturing process as fully vitrified clay is inert.

In the preparation of the Standard, reference was made to BS 65: 1988, *Specification for vitrified clay pipes and fittings, joints and ducts* and the assistance gained from this source is acknowledged.

CONTENTS

FOREWORD

A designer of a vitrified clay pipeline should, among other duties, evaluate the possible conditions to which component pipes, fittings and flexible joints will be exposed.

STANDARDS AUSTRALIA

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard specifies requirements for vitrified clay pipes and fittings with flexible joints, for operation under gravity, intended for the conveyance of sewage and industrial waste.

NOTES:

1 Appendix A sets out guidelines on the information to be provided by the purchaser at the time of enquiry or order.

2 Methods for determining compliance with this Standard are given in Appendix B.

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

AS
1057 Quality assurance and quality control—Glossary of terms
1152 Test sieves
1199 Sampling procedures and tables for inspection by attributes
1293 Retractable steel pocket rules
1399 Guide to AS 1199—Sampling procedures and tables for inspection by attributes
1449 Wrought alloy steels—Stainless and heat-resisting steel plate, sheet and strip
1646 Rubber joint rings for water supply, sewerage and drainage purposes
2193 Methods for calibration and grading of force-measuring systems of testing machines
3900 Quality systems—Guide to selection and use
3904 Quality systems—Guide to quality management and quality system elements

ISO
175 Plastics—Determination of the effects of liquid chemicals, including water

BS
65 Specification for vitrified clay pipes, fittings, joints and ducts

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

1.3.1 Flexible joint A joint with sealing and deflection performance, as specified in Section 6, for jointing pipes and fittings with elastomeric joint seal or seals housed in either—

(a) an integrally manufactured socket (socket type); or

(b) a separately manufactured sleeve (sleeve type).

1.3.2 Production pipe, fitting, sleeve, flexible joint or joint seal A pipe or fitting with or without an integral socket, sleeve or joint seal suitable for jointing with socket type or sleeve type flexible joint, manufactured in accordance with this Standard for the purpose of sale.

1.3.3 Test flexible joint A production flexible joint with the following component dimensions—

(a) socket or sleeve, maximum diameter of joint seal seating area;

(b) spigot(s), minimum diameter of joint seal seating area; and

(c) joint seal(s), minimum uncompressed cord diameter;

for minimum joint seal(s) compression in an assembled joint configuration and representative of a nominated group of production flexible joints.

1.3.4 Test piece A test piece may be either cut from a production pipe or be a clay bar (see Paragraph C4) or be a portion of a test pipe or test fitting (see Paragraph J4).

1.3.5 Test pipe, fitting, sleeve or joint seal A production pipe, fitting, sleeve or joint seal chosen at random and representative of a nominated group of production pipes, fittings, sleeves or joint seals respectively.

1.3.6 Test representative pipe A production pipe or special pipe manufactured using the same blend and materials and manufacturing process (see Clause 1.6.1) as that for the nominated group of production fittings of which it is representative and is deemed to have the crushing strength of such production fittings.