

Australian Standard[®]

**Elastomeric seals for waterworks
purposes**



This Australian Standard® was prepared by Committee WS-010, Flexible Jointing Gaskets. It was approved on behalf of the Council of Standards Australia on 27 June 2007. This Standard was published on 13 November 2007.

The following are represented on Committee WS-010:

- Australasian Plastics and Rubber Institute
 - Australian Chamber of Commerce and Industry
 - Australian Industry Group
 - Certification Interests (Australia)
 - Plastics Industry Pipe Association of Australia
 - Rubber Manufacturers Association of Australasia
 - Water Services Association of Australia
-

This Standard was issued in draft form for comment as DR 06725.

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.

Keeping Standards up-to-date

Australian Standards® are living documents that reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued.

Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments that may have been published since the Standard was published.

Detailed information about Australian Standards, drafts, amendments and new projects can be found by visiting www.standards.org.au

Standards Australia welcomes suggestions for improvements, and encourages readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.org.au, or write to Standards Australia, GPO Box 476, Sydney, NSW 2001.

Australian Standard[®]

Elastomeric seals for waterworks purposes

First published as AS 1646.1—2000, AS 1646.2—2000, AS 1646.3—2000 and AS 1646.4—2005.
AS 1646.1—2000, AS 1646.2—2000, AS 1646.3—2000 and AS 1646.4—2005 revised and redesignated AS 1646—2007.

COPYRIGHT

© Standards Australia

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Published by Standards Australia, GPO Box 476, Sydney, NSW 2001, Australia

ISBN 0 7337 8456 9

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee WS-010, Flexible Jointing Gaskets, to supersede the following:

AS

- 1646 Elastomeric seals for waterworks purposes
- 1646.1 Part 1: General requirements
- 1646.2 Part 2: Material requirements for pipe joint seals used in water and wastewater applications—Specifies by prescription formulation
- 1646.3 Part 3: Material requirements for pipe joints seals used in water and wastewater applications with the exception of natural rubber and polyisoprene compounds
- 1646.4 Part 4: Material requirements for pipe joint seals used in water and wastewater applications—Thermoplastic elastomers and vulcanizates

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.

The objective of this Standard is to set out requirements for a wide range of seals used in the water and sewerage industries, including the requirements for specific applications.

AS 1646 covers the general aspects of elastomeric seals, and refers to AS 681, a group of Standards that provides detailed requirements for specific elastomeric products. The AS 681 suite of Standards are cloned versions of EN 681, *Elastomeric seals—Material requirements for pipe joint seals used in water and drainage applications*. To date there are four parts to EN 681. As additional parts are added, and as amendments occur these will be updated as Australian Standards.

This Standard is essentially a performance-based standard to allow for innovation. It does not exclude materials, and manufacturing methods that may be developed in the future.

Where possible, references have been made to ISO Standards which have been taken into consideration at the time of preparation of this Standard.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral mandatory part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

CONTENTS

	<i>Page</i>
1 SCOPE AND GENERAL	4
2 REFERENCED DOCUMENTS.....	4
3 PERFORMANCE REQUIREMENTS	4
4 EFFECT ON WATER	5
5 DIMENSIONAL TOLERANCES.....	5
6 SURFACE IMPERFECTIONS	5
7 OPTIONAL REQUIREMENTS.....	5
8 MARKING	5
9 PURCHASING	6

APPENDICES

A PURCHASING GUIDELINES.....	7
B SPLICE JOINT TEST.....	8

STANDARDS AUSTRALIA

Australian Standard
Elastomeric seals for waterworks purposes**1 SCOPE AND GENERAL****1.1 Scope**

This Standard specifies requirements for the use of elastomeric seals in water, sewerage and drainage systems.

NOTE: Guidelines on information to be specified by the purchaser are given in Appendix A.

1.2 General

This Standard shall be used in conjunction with AS 681 where applicable.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

- 681 Elastomeric seals—Materials requirements for pipe joint seals used in water and drainage applications
- 681.1 Part 1: Vulcanized rubber
- 681.2 Part 2: Thermoplastic elastomers
- 681.3 Part 3: Cellular materials of vulcanized rubber
- 681.4 Part 4: Cast polyurethane sealing elements
- 1579 Arc-welded steel pipes and fittings for water and waste-water
- 4441 Oriented PVC (PVC-O) pipes for pressure applications

AS/NZS

- 1477 PVC pipes and fittings for pressure applications
- 1260 PVC-U pipes and fittings for drain, waste and vent application
- 2280 Ductile iron pipes and fittings
- 3518 Acrylonitrile butadiene styrene (ABS) compounds, pipes and fittings for pressure applications
- 4020 Testing of products for use in contact with drinking water
- 4058 Precast concrete pipes (pressure and non-pressure)
- 4765 Modified PVC (PVC-M) pipes for pressure applications

ISO

- 3302 Rubber—Tolerances for products
- 3302-1 Part 1: Dimensional tolerances

3 PERFORMANCE REQUIREMENTS**3.1 General**

Elastomeric seals shall comply with the relevant part of AS 681, dependent on the seal use, as specified in Table 1.



The remainder of this document
is available for purchase online at

➤ www.saiglobal.com/shop ◀

SAI Global also carries a wide range of publications from a wide variety of Standards Publishers:



Click on the logos to search the database online.