

Australian Standard<sup>®</sup>

**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.

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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
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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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STANDARDS AUSTRALIA  
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**RECONFIRMATION**  
**OF**  
**AS 1646–2007**  
**Elastomeric seals for waterworks purposes**  
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## NOTES

Australian Standard<sup>®</sup>

## **Elastomeric seals for waterworks purposes**

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## 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.

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# 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.