

Australian Standard®

**Elastomeric seals—Material
requirements for pipe joint seals used in
water and drainage applications**

**Part 4: Cast polyurethane sealing
elements**

STANDARDS
Australia



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 5 February 2008.

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- 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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PREFACE

This Standard was prepared by the Standards Australia Committee WS-010, Flexible Jointing Gaskets to set out requirements for thermoplastic elastomer and thermoplastic vulcanizate seals used in gravity sewerage, drainage and rainwater harvesting systems and non-pressure non-drinking water supply, including the material requirements for specific applications.

This Standard is identical with, and has been reproduced from EN 681-4—2000, *Elastomeric seals—Material requirements for pipe joint seals used in water and drainage applications*, Part 4: *Cast polyurethane sealing elements*.

As this Standard is reproduced from an International Standard, the following applies:

- (a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.
- (b) In the source text ‘EN 681-4’ should read ‘AS 681.4’.
- (c) A full point should be substituted for a comma when referring to a decimal marker.
- (d) Any French text on figures should be ignored.

References to International Standards should be replaced by references to Australian Standards, as follows:

<i>Reference to International Standard</i>		<i>Australian Standard</i>	
ISO		AS	
37	Rubber, vulcanized or thermoplastic—Determination of tensile stress-strain properties	1683.1	Methods of test for elastomers
		1683.1.1	Tension testing of vulcanized or thermoplastic rubber
188	Rubber, vulcanized or thermoplastic—Accelerated ageing and heat resistance tests	1683.26	Rubber, vulcanized or thermoplastic—Accelerated ageing and heat resistance tests
471	Rubber—Temperatures, humidities and times for conditioning and testing	1683.20	Standard temperatures, humidities and times for conditioning and testing
2859-1	Sampling procedures for inspection by attributes—Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection	1199	Sampling procedures for inspection by attributes
		1199.1	Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection
3951	Sampling procedures and charts for inspection by variables for percent nonconforming	2490	Sampling procedures and charts for inspection by variables for percent nonconforming

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Elastomeric seals—Material requirements for pipe joint seals used in water and drainage applications

Part 4: Cast polyurethane sealing elements

1 Scope

This standard specifies requirements for materials used in factory cast polyurethane sealing elements used in joints for drainage, sewerage and rainwater systems and non-potable water supply for continuous flow up to 45 °C.

General requirements for finished joint seals are also given; any additional requirements called for by the particular application are specified in the relevant product standards taking into account that the performance of pipe joints is a function of the seal material properties, seal geometry and pipe joint design.

This standard is applicable to joint seals for all pipeline materials including iron, steel, clay, fibre cement, concrete, plastics and glass-reinforced plastics.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

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|----------------|--|
| ISO 37, | <i>Rubber, vulcanized or thermoplastic - Determination of tensile stress-strain properties</i> |
| ISO 48, | <i>Rubber, vulcanized or thermoplastic - Determination of hardness (hardness between 10 and 100 IRHD)</i> |
| ISO 188, | <i>Rubber, vulcanized - Accelerated ageing or heat-resistance tests</i> |
| ISO 471, | <i>Rubber - Temperatures, humidities and times for conditioning and testing</i> |
| ISO 415, | <i>Rubber, vulcanized or thermoplastic - Determination of compression set at ambient, elevated or low temperatures</i> |
| ISO 2859-1, | <i>Sampling procedures for inspection by attributes - Part 1: Sampling plans indexed by acceptable quality level (AQL) for lot-by-lot inspection</i> |
| ISO 3302-1, | <i>Rubber - Tolerances for products - Part 1: Dimensional tolerances</i> |
| ISO 3384:1999, | <i>Rubber, vulcanized or thermoplastic - Determination of stress relaxation in compression at ambient and at elevated temperatures</i> |
| ISO 3951, | <i>Sampling procedures and charts for inspection by variables for percent nonconforming</i> |