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Australian Standard®

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

Part 2: Thermoplastic elastomers

This Australian Standard® was prepared by Committee WS-010, Flexible Jointing Gaskets. It was approved on behalf of the Council of Standards Australia on 10 July 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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Part 2: Thermoplastic elastomers

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PREFACE

This Standard was prepared by the Standards Australia Committee WS-010, Flexible Jointing Gaskets to supersede AS 1646.4.

The objective of this Standard is 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 681-2—2000, *Elastomeric seals—Material requirements for pipe joint seals used in water and drainage application*, Part 2: *Thermoplastic elastomers*.

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 681-2' should read 'AS 681.2'.

(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:

Reference to International Standard		*Australian Standard*	
ISO		AS	
37	Rubber, vulcanized or thermoplastic—Determination of tensile stress-strain properties	1683	Methods of test for elastomers
		1683.11	Tension testing of vulcanized or thermoplastic rubber
48	Rubber, vulcanized or thermoplastic—Determination of hardness (hardness between 10 IRHD and 100 IRHD)	1683.15.1	International rubber hardness
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
1431-1	Rubber, vulcanized or thermoplastic; resistance to ozone cracking; Part 1: static strain test	1683.24	Methods of test for rubber—Determination of the resistance of vulcanized or thermoplastic rubbers to ozone cracking—Static strain test
1817	Rubber, vulcanized—Determination of the effect of liquids	1683.23	Rubber—Vulcanized—Determination of resistance to liquids
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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Australian Standard

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

Part 2: Thermoplastic elastomers

1 Scope

This standard specifies requirements for materials used for moulded seals only of thermoplastic elastomers (TPE) used in joints of:

1) thermoplastic piping systems for non pressure waste water discharge (intermittent flow up to 95 °C) inside buildings;

2) thermoplastic piping systems for non-pressure underground drainage and sewerage (continuous flow up to 45 °C and intermittent flow up to 95 °C);

3) thermoplastic rainwater piping systems.

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.

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.

ISO 37,	*Rubber, vulcanized or thermoplastic - Determination of tensile stress-strain properties*
ISO 48,	*Rubber, vulcanized or thermoplastic - Determination of hardness (hardness between 10 and 100 IRHD)*
ISO 188,	*Rubber, vulcanized - Accelerated ageing or heat-resistance tests*
ISO 471,	*Rubber - Temperatures, humidities and times for conditioning and testing*
ISO 815,	*Rubber, vulcanized or thermoplastic - Determination of compression set at ambient, elevated or low temperatures*
ISO 1431-1,	*Rubber, vulcanized or thermoplastic - Resistance to ozone cracking - Part 1: Static strain test*