

# Australian/New Zealand Standard™

## **Thermal-bonded polymeric coatings on valves and fittings for water industry purposes**



## **AS/NZS 4158:2003**

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This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee WS-022, Valves for Water Supply Purposes. It was approved on behalf of the Council of Standards Australia on 3 January 2003 and on behalf of the Council of Standards New Zealand on 24 January 2003.

This Standard was published on 5 March 2003.

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The following are represented on Committee WS-022:

Australian Industry Group  
Australian Chamber of Commerce  
Australian Valve Manufacturers Association  
Business New Zealand  
Master Plumbers Australia  
New Zealand Metal Casting Industry Association  
New Zealand Water and Waste Association  
Society of Mechanical Engineers Australia  
Plastics Pipe Institute Association of Australia  
Water Industry Alliance  
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*This Standard was issued in draft form for comment as DR 02420.*

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**AS/NZS 4158:2003**  
(Incorporating Amendment No. 1)

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**Thermal-bonded polymeric coatings on  
valves and fittings for water industry  
purposes**

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## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee WS-022, Valves For Water Supply Purposes, at the request of manufacturers and users of polymeric coatings for valves and fittings, to supersede AS/NZS 4158:1996.

*This Standard incorporates Amendment No. 1 (September 2005). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.*

The objective of this Standard is to provide requirements and performance tests for coating systems for valves and fittings used in supply systems including potable water, recycled water and wastewater systems, together with default compliance requirements for the use of manufacturers and certification bodies.

Changes to the previous edition area as follows:

- (a) The previous edition of the Standard covered fusion-bonded epoxies and polyamides which were typically used at that time. This edition encompasses both thermoplastic and thermosetting coating materials
- (b) The limiting temperature for use has been changed to 50°C to be consistent with the hot water immersion test temperature, which was reduced to accommodate thermoplastic coatings.
- (c) Limits on water absorption have been tightened to reflect current coating material performance.
- (d) Continuity testing has been updated to a high voltage test suitable for the typical coating thicknesses and cast substrates used for valve bodies and fittings.
- (e) Improvements have been made to other type tests, process verification tests and the batch release tests. Batch release testing requirements have been placed on the coating material supplier.
- (f) Methods for demonstrating compliance with the Standard have been expanded and made mandatory.

Polymeric coatings referred to in this edition of the Standard apply to both thermoplastic and thermosetting, factory-applied, thermal-bonded coatings used to prevent corrosion of the internal and external surfaces of metallic valves and fittings.

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 part of a Standard, whereas an 'informative' appendix is only for information and guidance.

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