

Australian/New Zealand Standard™

**Welding consumables for build-up and
wear resistance**



AS/NZS 2576:2005

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee WD-002, Welding Consumables. It was approved on behalf of the Council of Standards Australia on 6 July 2005 and on behalf of the Council of Standards New Zealand on 15 July 2005.

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The following are represented on Committee WD-002:

Australian Chamber of Commerce and Industry
Australian Industry Group
Bureau of Steel Manufacturers of Australia
Business New Zealand
CSIRO Manufacturing and Infrastructure Technology
Welding Technology Institute of Australia

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Welding consumables for build-up and wear resistance

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee WD-002, Welding Consumables, to supersede AS/NZS 2576—1996, *Welding consumables for build-up and wear resistance—Classification system*.

This Standard incorporates Amendment No. 1 (October 2006). 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 Standard is largely based on the Welding Technology Institute of Australia (WTIA) Technical Note 4.

The objective of this Standard is to specify requirements for welding consumables for build-up and wear resistance.

This edition is technically equivalent to the 1996 edition but incorporates the following changes:

- (a) Amendments to Table 2.2, including the deletion of alloy Type 25 for consistency with relevant International Standards.
- (b) Amendments to Table 2.7 with the addition of Suffix B9 for FCA, laser and GTA surfacing using alloy powders or granules.
- (b) Some changes to the description of typical microstructures in Appendix A.
- (c) Editorial changes and adjustments, which include the following:
 - (i) Update of references to other Standards
 - (ii) Alignment with current Standards Australia/Standards New Zealand policies.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the appendices 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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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies requirements for welding consumables for build-up and wear resistance.

NOTES:

- 1 Typical photomicrographs are shown in Appendix A.
- 2 Guidance on the selection of consumables is given in WTIA Technical Note 7.

1.2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

- 1674 Safety in welding and allied processes
1674.1 Part 1: Fire precautions
1674.2 Part 2: Electrical
1815 Metallic materials
1815.1 Part 1: Rockwell hardness test—Test method scales
(A, B, C, D, E, F, G, H, K, N, T)
2812 Welding, brazing and cutting of metals—Glossary of terms

AS/NZS

- 1050 Methods for the analysis of iron and steel
1050.1 Part 1: Sampling iron and steel for chemical analysis
1553 Covered electrodes for welding
1553.3 Part 3: Corrosion-resisting chromium and chromium nickel steel electrodes
3678 Structural steel—Hot-rolled plates, floorplates and slabs

WTIA

- Technical Note 4—Hardfacing
Technical Note 7—Health and safety in welding

1.3 DEFINITIONS

For the purpose of this Standard, the definitions given in AS 2812 and those below apply.

1.3.1 Impact

The degree of severity of the impact expressed as follows:

- (a) *High impact* Impact causing fracture or plastic deformation.
- (b) *Low impact* Impact causing no perceptible deformation.