

AS 1674.1:2025



STANDARDS
Australia



Safety in welding and allied processes

Part 1: Fire precautions



AS 1674.1:2025

This Australian Standard ® was prepared by WD-004, Welding Safety. It was approved on behalf of Standards Australia's Standards Development and Accreditation Committee on 20 November 2024.

This Standard was published on 24 January 2025.

The following are represented on Committee WD-004:

- Australian Industry Group
- Australian Institute of Occupational Hygienists
- Australian Manufacturing Workers Union
- Australian Stainless Steel Development Association
- Australian Steel Institute
- Better Regulation Division (Fair Trading, SafeWork NSW, TestSafe)
- Materials Australia
- Weld Australia

This Standard was issued in draft form for comment as DR AS 1674.1:2024.

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ISBN 978 1 76175 010 6

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Originated as SAA Int 201—1945.
Revised and redesignated as AS 1674.1— 1990.
Second edition 1997.
Third edition 2025.

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Preface

This Standard was prepared by the Standards Australia Committee WD-004, Welding Safety, to supersede AS 1674.1—1997.

The objective of this Standard is to specify requirements for the reduction of fire and explosion risks associated with the performance of welding and other hot work activities in hazardous environments.

A list of all parts in the AS 1674 series can be found in the Standards Australia online catalogue.

The major changes in this edition are as follows:

- (a) Revision of hot-work supervision and firewatching requirements.
- (b) Addition of a checklist to support risk assessment.

The inclusion of roles and responsibilities in AS 1674.1 was approved by PMG on 18 July 2023.

The terms “normative” and “informative” are used in Standards 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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Australian Standard®

Safety in welding and allied processes

Part 1: Fire precautions

Section 1 Scope and general

1.1 Scope

This document specifies requirements for the reduction of fire and explosion risks associated with the performance of welding and other hot work activities in hazardous environments.

These requirements include precautions to be taken before, during, and immediately after the completion of hot work (including welding and allied processes). Specifically, these precautions apply to hot work during manufacturing, construction, maintenance, repairs, demolition and where plant or equipment has contained flammable, combustible or explosive material, and the installation, repairs and modification of structures, plant, equipment or pipework etc in proximity of flammable or hazardous materials.

This document covers, but is not limited to, the use of any electric, thermal or mechanical process when welding, joining, surfacing, cutting, gouging or heating including —

- (a) welding;
- (b) brazing, including braze welding, flame brazing, etc. (refer to AS 2812);
- (c) soldering;
- (d) thermal cutting, e.g. flame cutting, plasma cutting, arc cutting, etc.;
- (e) thermal gouging, e.g. flame gouging, oxy-lancing, plasma gouging, air-arc gouging, etc.;
- (f) thermal spraying;
- (g) thermal straightening;
- (h) metal preparation including metal cutting, e.g. grinding, gouging, drilling, machining, etc.; and
- (i) any other process that produces or utilizes flames, sparks or hot metal capable of initiating a fire or explosion in a hazardous area.

Although this document primarily applies to hot work in welding and allied processes, it may more generally be applied to other forms of ignition sources in hazardous areas.

NOTE 1 The joining of materials other than metals (e.g. non-metallic materials) is covered by the scope of this document.

NOTE 2 Refer to AS 2812 for a variety of welding, brazing, soldering and other hot-work processes.

NOTE 3 Refer to Weld Australia's Technical Note 7 for general information on safety in welding.

This document does not cover protective clothing or the protection of operators against electric shock, asphyxiation, poisoning and other hazards.

1.2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document.

NOTE Documents referenced for informative purposes are listed in the Bibliography.