

Australian Standard®

**Metal finishing—Preparation and
pretreatment of surfaces**

Part 0: Method selection guide

This Australian Standard was prepared by Committee MT/9, Metal Finishing. It was approved on behalf of the Council of Standards Australia on 1 September 1997 and published on 5 December 1997.

The following interests are represented on Committee MT/9:

Australasian Institute of Metal Finishing
Australian Chamber of Commerce and Industry
Department of Defence (Australia)
Institute of Metals and Materials Australasia
Metal Trades Industry Association of Australia
Royal Australian Chemical Institute
Society of Automotive Engineers — Australasia
Telstra Corporation

Review of Australian Standards. To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

This Standard was issued in draft form for comment as DR 96514.

STANDARDS AUSTRALIA

RECONFIRMATION

OF

AS 1627.0 —1997

**Metal finishing—Preparation and pretreatment of surfaces
Part 0: Method selection guide**

RECONFIRMATION NOTICE

Technical Committee MT-009 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 20 March 2017.

The following are represented on Technical Committee MT-009:

Australasian Institute of Surface Finishing
Australian Chamber of Commerce and Industry
Australian Industry Group
Australian Steel Institute
Bureau of Steel Manufacturers of Australia
Galvanizers Association of Australia
Galvanizing Association of New Zealand
New Zealand Metal Roofing Manufacturers

NOTES

Australian Standard[®]

**Metal finishing—Preparation and
pretreatment of surfaces**

Part 0: Method selection guide

Originated as AS 1627.0 —1977.
Second edition 1997.

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee MT/9, Metal Finishing, to supersede AS 1627.0—1977, *Metal finishing — Preparation and pretreatment of surfaces*, Method 0: *Method selection guide for preparation and pretreatment of steel surfaces*.

This Standard is the result of a consensus among Australian and New Zealand representatives on the Joint Committee to produce it as an Australian Standard.

This Standard is the first part of a series of Standards titled *Metal finishing—Preparation and pretreatment of surfaces*, and the objective of this revision is to upgrade the guidance given on the selection and application of the appropriate methods of surface preparation of metallic materials prior to the application of a protective coating. Other parts in the series are as follows:

AS

- 1627.1 Part 1: Cleaning using liquid solvents and alkaline solutions
- 1627.2 Part 2: Power tool cleaning
- 1627.3 Part 3: Flame descaling
- 1627.4 Part 4: Abrasive blast cleaning
- 1627.5 Part 5: Pickling, descaling and oxide removal
- 1627.6 Part 6: Chemical conversion treatment of metals
- 1627.7 Part 7: Hand tool cleaning of metal surfaces
- 1627.9 Part 9: Pictorial surface preparation standards for painting steel surfaces (ISO 8501-1:1988)
- 1627.10 Part 10: Cleaning and preparation of metal surfaces using acid solutions (non-immersion)

The Standard covering wash primer pretreatment of metal surfaces (formerly AS 1627.8 which has been withdrawn) is AS 3884—1991, *Etch primers (single pack and two-pack) for pretreating metal surfaces*.

In this edition, the appendix which gave examples of surface preparation specifications has been deleted. Advice on the preparation of coating specifications is given in AS/NZS 2312—1994, *Guide to the protection of iron and steel against exterior atmospheric corrosion*.

© Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

CONTENTS

	<i>Page</i>
1 SCOPE	4
2 REFERENCED DOCUMENTS	4
3 THE PURPOSE OF SURFACE PREPARATION	5
4 SCOPE OF STANDARDS IN THE AS 1627 SERIES	9
5 SPECIFYING SURFACE PREPARATION	14

STANDARDS AUSTRALIA

Australian Standard

Metal finishing—Preparation and pretreatment of surfaces

Part 0: Method selection guide

1 SCOPE This Standard gives guidance on the selection of the appropriate methods for the preparation and pretreatment of metal surfaces prior to the application of a protective coating. The methods and the related Australian Standards are as follows:

- (a) Solvent and alkaline cleaning AS 1627.1
- (b) Power tool cleaning AS 1627.2
- (c) Flame descaling AS 1627.3
- (d) Abrasive blast cleaning AS 1627.4
- (e) Pickling and descaling AS 1627.5
- (f) Chemical conversion treatment AS 1627.6
- (g) Hand tool cleaning AS 1627.7
- (h) Treatment with acid solutions (non-immersion) AS 1627.10

The Standard also makes reference to AS 1627.9, which gives pictorial guidance on surface finishes of steel after various treatments.

The AS 1627 series of Standards apply primarily to surfaces intended to be painted, powder coated, metal sprayed or hot dipped in molten metal. For requirements for surface preparation prior to the application of electroplated coatings refer to ASTM B 183, ASTM B 242, ASTM B 252, ASTM B 253 and ASTM B 254.

NOTE: Before any of these surface preparation methods are applied to a metal surface, it is important that, where necessary, prior dressing be carried out to remove any gross defects present on the surface (see Clause 3.2).

2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS

- 1627 Metal finishing—Preparation and pretreatment of surfaces
- 1627.1 Part 1: Cleaning using liquid solvents and alkaline solutions
- 1627.2 Part 2: Power tool cleaning
- 1627.3 Part 3: Flame descaling
- 1627.4 Part 4: Abrasive blast cleaning
- 1627.5 Part 5: Pickling, descaling and oxide removal
- 1627.6 Part 6: Chemical conversion treatment of metals
- 1627.7 Part 7: Hand tool cleaning of metal surfaces
- 1627.9 Part 9: Pictorial surface preparation standards for painting steel surfaces (ISO 8501-1:1988)
- 1627.10 Part 10: Cleaning and preparation of metal surfaces using acid solutions (non-immersion)
- 3894 Site testing of protective coatings
- 3894.1 Method 1: Non-conductive coatings—Continuity testing—High voltage ('brush') method