AS 4108—2005
Reconfirmed 2017

AS 4108—2005

Australian Standard™

# Metal finishing—Glossary of terms in electroplating and related processes

STANDARDS AUSTRALIA

This Australian Standard was prepared by Committee MT-009, Metal Finishing. It was approved on behalf of the Council of Standards Australia on 27 April 2005.
This Standard was published on 11 May 2005.

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The following are represented on Committee MT-009:

Australian Institute of Metal Finishing
Australian Chamber of Commerce and Industry
Australian Industry Group
Department of Defence
Galvanizers Association of Australia
Institute of Materials Engineering Australia
Powder Coaters Association
The Royal Australian Chemical Institute
Society of Automotive Engineers—Australasia
Telstra Corporation

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*This Standard was issued in draft form for comment as DR 04542.*

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# RECONFIRMATION
# OF
# AS 4108—2005
# Metal finishing—Glossary of terms in electroplating and related processes

## 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

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# Metal finishing—Glossary of terms in electroplating and related processes

Originated as AS K178—1969.
Previous edition AS 4108—1993.
Second edition 2005.



Published by Standards Australia, GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 6680 3

# PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee MT-009, Metal Finishing, to supersede AS 4108—1993, *Metal finishing—Glossary of terms used in electroplating and related processes*. After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian rather than an Australian/New Zealand standard.

This Standard is based on but not equivalent to ISO 2080:1981, *Electroplating and related processes—Vocabulary*. Additional definitions have been included so as to meet Australian industry requirements.

The objective of this revision is to provide a list of current terms used in electroplating and other related industries and to delete the terms from the Standard that have become redundant.

During the revision of this Standard, the Committee considered only those terms in constant use in the electroplating industry in Australia, and which relate to the coating itself.

# FOREWORD

Many terms that relate to electroplating and similar industries are known by more than one name. In the case of some defects, the same name may be used by two persons to indicate two entirely different types of defect. Such variations in meaning have led to confusion, especially where writing is the only form of communication in the exchange of ideas.

This Standard concentrates on eliminating this confusion by using the most common terms which are used in Australian industry.

STANDARDS AUSTRALIA

# Australian Standard
# Metal finishing—Glossary of terms in electroplating and related processes

| Term | Definition |
|---|---|
| **abrasion blast-cleaning** | Impingement of a high-kinetic-energy stream of abrasive on to the surface to be prepared. |
| **activation** | Elimination of a passive surface condition.<br>NOTE: Not to be confused with 'conditioning'. |
| **addition agent; additive** | A material added, usually in small quantities, to a solution to modify its characteristics or the properties of the metallic deposit obtained from the solution. |
| **adhesion** | The strength of the bond between a coating and its substrate, expressed as the force per unit area required to separate them. |
| **alkaline blackening; black finishing:** | Production of a black oxide of sulfide coating on steel or copper (copper alloys) by immersion in hot alkaline salt solutions. |
| **alkaline cleaning** | Cleaning by a water solution containing alkaline degreasing cleaning components and detergents. |
| **alkaline descaling** | The process of descaling a metal by immersion in a hot alkaline solution. |
| **anion** | A negatively charged ion. |
| **anode** | In electrolysis, the electrode at which negative ions are discharged, positive ions are formed or other oxidizing reactions occur. |
| **anode corrosion** | Dissolution of anode metal by the electrochemical action in the electrolytic cell. (The dissolution of the anode by chemical action of the electrolyte without current is generally not called corrosion, but dissolution.) |
| **anode efficiency** | Current efficiency of a specified anodic process. |
| **anode film** | Solid film formed on the anode during electrolysis.<br>NOTE: The preferred term is 'diffuser layer'. |
| **anode polarization** | *See* 'polarization'. |
| **anodic coating:** | |
| **anodic oxide coating** | A protective, decorative or functional coating formed by conversion of the surface of a metal in an electrolytic oxidation process. See 'anodizing'. |
| **sacrificial coating** | A metallic coating less noble than the basis metal. |
| **anodizing; anodic oxidation** | An electrolytic oxidation process in which the surface layer of a metal, such as aluminium, magnesium or zinc, is converted to a coating, usually an oxide, having protective, decorative or functional properties. |
| **anodized aluminium** | Aluminium with an anodic oxidation coating, produced by an electrolytic oxidation process, in which the surface of the aluminium is converted to a coating, generally an oxide, having protective, decorative or functional properties. |

 