

Australian Standard™

**Chemical admixtures for concrete,
mortar and grout**

Part 1: Admixtures for concrete



This Australian Standard was prepared by Committee BD/33, Chemical Admixture for Concrete. It was approved on behalf of the Council of Standards Australia on 28 June 2000 and published on 4 October 2000.

The following interests are represented on Committee BD/33:

The Association of Consulting Engineers Australia
Australian Chamber of Commerce and Industry
Australian Concrete Repair Association
Australian Pre-mixed Concrete Association
AUSTROADS
Cement and Concrete Association of Australia
Concrete Institute of Australia
Department of Land and Water Conservation NSW
Institution of Engineers Australia
University of New South Wales
University of Western Sydney

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about Standards can be found by visiting the Standards Australia web site at www.standards.com.au and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Australian Standard*, has a full listing of revisions and amendments published each month.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.com.au, or write to the Chief Executive, Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001.

This Standard was issued in draft form for comment as DR 98465.

This is a preview. [Click here to purchase the full publication.](#)

STANDARDS AUSTRALIA

RECONFIRMATION

OF

AS 1478.1–2000

**Chemical admixtures for concrete, mortar and grout
Part 1: Admixtures for concrete**

RECONFIRMATION NOTICE

Major stakeholders of this publication have 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 29 August 2018.

NOTES

Australian Standard™

Chemical admixtures for concrete, mortar and grout

Part 1: Admixtures for concrete

Originated in part as part of AS A173—1969 and AS CA58—1969.
Previous edition AS1478—1992.
Revised and redesignated AS 1478.1—2000.

COPYRIGHT

© Standards Australia International

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

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

ISBN 0 7337 3513 4

PREFACE

This Standard was prepared by the Standards Australia Committee BD/33, Chemical Admixtures for Concrete, to supersede AS 1478—1992, MP 20.1—1971, *Permeability-reducing admixtures*, MP 20.2—1975, *Thickening admixtures for use in concrete and mortar*, and MP 20.3—1977, *Expanding admixtures for use in concrete, mortar and grout*.

The objective of this Standard is to provide users and specifiers of chemical admixtures with the requirements for chemical admixtures to be added to concrete mixes incorporating portland and blended cements.

This Revision includes the following changes:

- (a) Requirements for compression testing at 1 year have been removed.
- (b) Provision has been made for a mid-range water-reducing admixture, having performance intermediate between normal and high-range water-reducing admixtures.
- (c) Provision has been made for special admixtures having claimed attributes that cannot be verified by current standard tests, with the objective of demonstrating the influence of such admixtures on normal concrete properties.
- (d) The three miscellaneous publications MP 20.1, MP 20.2 and MP 20.3 have been revised and added to this document as informative appendices.

CONTENTS

	<i>Page</i>
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE	4
1.2 APPLICATION	4
1.3 REFERENCED DOCUMENTS	4
1.4 DEFINITIONS	5
1.5 TYPES AND SYMBOLS	6
1.6 PACKAGING	6
1.7 INFORMATION TO BE SUPPLIED	6
1.8 MARKING	7
SECTION 2 PROPERTIES OF ADMIXTURES	
2.1 ADMIXTURES OTHER THAN AIR-ENTRAINING ADMIXTURES	8
2.2 AIR-ENTRAINING ADMIXTURES	9
SECTION 3 GENERAL TEST REQUIREMENTS	
3.1 SCOPE OF SECTION	11
3.2 GENERAL ACCEPTANCE TESTS	11
3.3 SPECIFIC ACCEPTANCE TESTS FOR ADMIXTURES	12
3.4 CONCRETE MIXES FOR GENERAL ACCEPTANCE TESTS	12
SECTION 4 TEST METHODS	
4.1 SCOPE OF SECTION	14
4.2 PREPARATION OF TEST SPECIMENS	14
4.3 TEST METHODS	14
4.4 TEST REPORT	14
APPENDICES	
A SAMPLING PROCEDURE	16
B INFORMATION ON CHEMICAL ADMIXTURES FOR USE IN CONCRETE	19
C DETERMINATION OF CHLORIDE ION CONTENT IN ADMIXTURES	34
D INFORMATION ON THICKENING ADMIXTURES FOR USE IN CONCRETE, MORTAR AND GROUT	38
E INFORMATION ON SHRINKAGE-REDUCING AND SHRINKAGE- COMPENSATING ADMIXTURES FOR USE IN CONCRETE, MORTAR AND GROUT	41
F INFORMATION ON PERMEABILITY-REDUCING ADMIXTURES FOR USE IN CONCRETE, MORTAR AND GROUT	45