AS/NZS 3518:2004 (Incorporating Amendment No. 1)

Australian/New Zealand Standard™

Acrylonitrile butadine styrene (ABS) compounds, pipes and fittings for pressure applications





AS/NZS 3518:2004

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee PL-021, PVC, ABS and Polyamide Pipe Systems. It was approved on behalf of the Council of Standards Australia on 25 June 2004 and on behalf of the Council of Standards New Zealand on 16 July 2004. This Standard was published on 28 July 2004.

The following are represented on Committee PL-021:

Australian Chamber of Commerce and Industry Australian Nuclear Science and Technology Organisation Certification Bodies (Australia) CSIRO Manufacturing and Infrastructure Technology Energy Networks Association Engineers Australia Local Government New Zealand Master Plumbers, Gasfitters and Drainlayers New Zealand New Zealand Water and Waste Association Plastics Industry Pipe Association of Australia Plastics New Zealand Water Services Association of Australia

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 Standards may also be withdrawn.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 joint Australian/New Zealand Standards can be found by visiting the Standards Web Shop at www.standards.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

Alternatively, both organizations publish an annual printed Catalogue with full details of all current Standards. For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR 01083.

AS/NZS 3518:2004 (Incorporating Amendment No. 1)

Australian/New Zealand Standard™

Acrylonitrile butadine styrene (ABS) compounds, pipes and fittings for pressure applications

Originated as AS 3518.1—1988 and AS 3518.2—1988. Jointly revised and redesignated as AS/NZS 3518:2004. Reissued incorporating Amendment No. 1 (May 2006).

COPYRIGHT

© Standards Australia/Standards New Zealand

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.

Jointly published by Standards Australia, GPO Box 476, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 6174 7

2

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee PL-021: PVC, ABS and polyamide pipe systems to supersede AS 3518.1—1988, Acrylonitrile butadiene styrene (ABS) pipes and fittings for pressure applications—Pipes and AS 3518.2—1988, Acrylonitrile butadiene styrene (ABS) pipes and fittings for pressure applications—Solvent cement fittings.

This Standard incorporates Amendment No. 1 (May 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 objective of this document is to provide a standard specification for manufacturers and purchasers of these products.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the appendix to which they apply. A 'normative' appendix is an integral part of a Standard, whereas an 'informative' appendix is only for information and guidance.

Statements expressed in mandatory terms in notes to tables and figures are deemed to be requirements of this Standard. Other notes are for information and guidance only.

CONTENTS

Page

SECTION 1 SCOPE AND GENERAL

SECIIO				
1.1	SCOPE			
1.2	REFERENCED DOCUMENTS 4			
1.3	DEFINITIONS			
1.4	NOTATION			
1.5	CLASSIFICATION			
1.6	MARKING9			
1.7	SOLVENT CEMENTS10			
1.8	ELASTOMERIC JOINTING SEALS			
1.9	STORAGE AND TRANSPORT11			
SECTIO	N 2 PERFORMANCE REQUIREMENTS			
2.1	SCOPE			
2.2	COMPOSITION			
2.3	RERATING AT ELEVATED TEMPERATURES 14			
2.4	DIMENSIONS14			
2.5	FREEDOM FROM DEFECTS 14			
2.6	EFFECT ON WATER 14			
2.7	PIPE TESTS			
2.8	FITTINGS TESTS16			
2.9	ELASTOMERIC SEAL JOINT TESTS 17			
2.10	TESTING SUMMARY 17			
SECTION 3 DESIGN REQUIREMENTS				

SE EQUI

3.1	PIPES	. 19
3.2	MOULDED FITTINGS	. 29
3.3	POST-FORMED BENDS AND COUPLINGS	. 33
3.4	ELASTOMERIC SEAL JOINTS	. 33
3.5	FLANGED ENDS ON FITTINGS	. 35

APPENDICES

А	MEANS DEMONSTRATING COMPLIANCE WITH THIS STANDARD	. 36
В	PREPARATION OF TEST SPECIMEN FOR SHORT-TERM PRESSURE TEST	. 41
С	DETERMINATION OF MULTIPLIERS FOR ELASTOMERIC SEAL JOINT	
	HYDROSTATIC PRESSURE TEST	. 42
D	DESIGN WALL THICKNESS FOR SERIES 1, SERIES 2 AND SERIES 3 PIPES	
	FOR SPECIAL APPLICATIONS	. 45
E	CALCULATION OF MAXIMUM ALLOWABLE OPERATING PRESSURE	
	(MAOP) AT 20°C FOR SERIES 1, SERIES 2 and SERIES 3 PIPES	. 46
F	DETERMINATION OF 99.5% LOWER PREDICTION LIMIT OF THE ONE HOU	UR
	HYDROSTATIC STRENGTH ($\sigma_{1 \text{ hr, LPL, 0.995}}$)	. 47



This is a free preview. Purchase the entire publication at the link below:

Product Page

S Looking for additional Standards? Visit Intertek Inform Infostore

> Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation