MALAYSIAN STANDARD

MS 1983:2007
(CONFIRMED:2014)

Fine ceramics (advanced ceramics, advanced technical ceramics) – Test method for shear strength of continuous fiber-reinforced advanced ceramics at ambient temperatures

ICS: 81.060.30

Descriptors: advanced ceramic, continuous fiber-reinforced, shear strength, test method

FOR SALE WITHIN MALAYSIA ONLY

This Malaysian Standard in identical to ASTM C1292-00 (Reapproved 2005), Standard test method for shear strength of continuous fiber-reinforced advanced ceramics at ambient temperature. Copyright ASTM International, 100 Barr Harbor Drive, West Conshohocken, PS 19428, USA. Reprinted by permission of ASTM International

© Copyright 2014

DEPARTMENT OF STANDARDS MALAYSIA

Preview Only

DEVELOPMENT OF MALAYSIAN STANDARDS

The **Department of Standards Malaysia (STANDARDS MALAYSIA)** is the national standardisation and accreditation body.

The main function of STANDARDS MALAYSIA is to foster and promote standards, standardisation and accreditation as a means of advancing the national economy, promoting industrial efficiency and development, benefiting the health and safety of the public, protecting the consumers, facilitating domestic and international trade and furthering international cooperation in relation to standards and standardisation.

Malaysian Standards are developed through consensus by committees which comprise of balanced representation of producers, users, consumers and others with relevant interests, as may be appropriate to the subject in hand. These standards where appropriate are adoption of international standards. To the greatest extent possible, Malaysian Standards are aligned to or are adoption of international standards. Approval of a standard as a Malaysian Standard is governed by the Standards of Malaysia Act 1996 (Act 549). Malaysian Standards are reviewed periodically. The use of Malaysian Standards is voluntary except in so far as they are made mandatory by regulatory authorities by means of regulations, local by-laws or any other similar ways.

For the purposes of Malaysian Standards, the following definitions apply

Revision: A process where existing Malaysian Standard is reviewed and updated which resulted in the publication of a new edition of the Malaysian Standard

Confirmed MS: A Malaysian Standard that has been by the responsible committee and confirmed that its contents are current.

Amendment: A process where a provision of existing Malaysian Standard is altered. The changes are indicated in an amendment page which is incorporated into an existing Malaysian Standard. Amendments can be of technical and/or editorial nature.

Technical corrigendum: A corrected reprint of the current edition which issued to correct either a technical error or ambiguity in a Malaysian Standard inadvertently introduced in drafting or in printing and which could lead to incorrect or unsafe application of the publication.

NOTE. Technical corrigendum are not to correct errors which can be assumed to have no consequence in the application of the Malaysian Standard, for example, minor printing errors.

The Department of Standards has appointed **Institut Kimia Malaysia (IKM)** as the agent to develop, distribute and sell Malaysian Standards.

For further information on Malaysian Standards, please contact:

Department of Standards Malaysia
Century Square Level 1 & 2,
Block 2300, Jalan Usahawan,
Cyberjaya,
63000 Selangor,
Malaysia
Tel: 60 3 8318 0002
Fax: 60 3 8319 3131
http://www.standardsmalaysia.gov.my
Email: central@standardsmalaysia.gov.my

OR **Institut Kimia Malaysia**
129A, Jalan Aminuddin Baki,
Taman Tun Dr Ismail,
60000 Kuala Lumpur,
Malaysia

Tel: 60 3 7724 1929
Fax: 60 3 7725 1929
http://www.ikm.org.my
Email: ikm-sda@ikm.org.my

© STANDARDS MALAYSIA 2014 – All rights reserved

Preview Only

CONTENTS

		Page
	Committee representation	ii
	National foreword	iii
1	Scope	1
2	Referenced documents	1
3	Terminology	1
4	Summary of test method	2
5	Significance and use	2
6	Interferences	2
7	Apparatus	3
8	Hazards	3
9	Test specimens	4
10	Procedure	4
11	Calculation of results	6
12	Report	7
13	Precision and bias	7
14	Keywords	8

Figures

1	Schematic of test fixture for the double-notched compression specimen	9
2	Schematic of double-notched compression specimen	9
3	Idealized force, shear and moment diagrams for asymmetric four-point loading	10
4	Schematic of test fixture for the iosipescu test	11
5	Schematic of the iosipescu specimen	11
6	Orientation of materials planes to obtain the strength of any one of the three shear planes of laminated composites	12
7	Schematic representation of adhesively bonded end-tabs for determining interlaminar shear strength using thin specimens	12
8	Specimen placement in fixture	13

Preview Only

© STANDARDS MALAYSIA 2007 – All rights reserved

Committee representation

The Chemical and Materials Industry Standards Committee (ISC B) under whose authority this Malaysian Standard was adopted, comprises representatives from the following organisations:

Department of Mineral and Geoscience
Department of Standards Malaysia
Malaysian Association of Standard Users
Malaysian Ceramic Industry Group
Malaysian Institute of Chemistry
Malaysian Paint Manufacturers Association
Malaysian Pulp and Paper Manufacturers Association
Ministry of Agricultural and Agro-Based Industry (Department of Agricultural)
Ministry of Defence (Science and Technology Research Institute for Defence)
Ministry of International Trade and Industry
Ministry of Science, Technology and Innovation (Department of Chemistry, Malaysia)
Universiti Malaya
Universiti Sains Malaysia

The Technical Committee on Fine Ceramics which recommends adoption of the ASTM Standard consists of representatives from the following organisations:

CeramTec - Innovative Ceramic Engineering Sdn Bhd

Goh Ban Huat Berhad

Institut Penyelidikan Teknologi Nuklear Malaysia

Institute of Materials Malaysia

RS Advanced Technology Sdn Bhd

SIRIM Berhad (Advanced Materials Research Centre)

SIRIM Berhad (Plastics and Ceramics Programme)

SIRIM Berhad (Secretariat)

Universiti Kebangsaan Malaysia

Universiti Putra Malaysia

Universiti Sains Malaysia

Preview Only

© STANDARDS MALAYSIA 2007 – All rights reserved

NATIONAL FOREWORD

The adoption of the ASTM Standard was recommended by the Technical Committee on Fine Ceramics under the authority of the Chemical and Materials Industry Standards Committee.

This Malaysian Standard is identical to ASTM C 1292-00 (Reapproved 2005), *Standard test method for shear strength of continuous fiber-reinforced advanced ceramics at ambient temperatures*, published by the ASTM International.

Compliance with a Malaysian Standard does not of itself confer immunity from legal obligations.

Preview Only

© STANDARDS MALAYSIA 2007 – All rights reserved