

Translated and Published by Japanese Standards Association

JIS K 7079-2:2012

Carbon fiber reinforced plastics— Testing methods for in-plane shear properties—Part 2: Double V-notch shear method

ICS 83.120

Reference number: JIS K 7079-2:2012(E)

K 7079-2:2012

Date of Establishment: 2012-03-21

Date of Public Notice in Official Gazette: 2012-03-21

Investigated by: Japanese Industrial Standards Committee

Standards Board

Technical Committee on Chemical Products

JIS K 7079-2:2012, First English edition published in 2013-07

Translated and published by: Japanese Standards Association 4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN

In the event of any doubts arising as to the contents, the original JIS is to be the final authority.

© JSA 2013

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

Printed in Japan

NH/AT

Contents

	Page
1	Scope1
2	Normative references — 1
3	Terms and definitions — 1
4	Principle2
5 5.1 5.2	Conditioning and test atmosphere 3 Conditioning of test piece 3 Test atmosphere temperature 3
6	Test apparatus and implement
7.1 7.2 7.3 7.4 7.5 7.6	Test piece
8 8.1	Operation procedure 7 Connecting method between compression testing machine and testing jig, and attachment of test piece 7
8.2 8.3 8.4	Test speed
9 9.1 9.2 9.3 9.4 9.5 9.6	Calculation and expression of results10In-plane shear stress—in-plane shear strain diagram10In-plane shear strength11Ultimate in-plane shear strain11In-plane shear elasticity modulus11Offset in-plane shear strength11Expression of results12
10	Test report

Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law.

This **JIS** document is protected by the Copyright Law.

Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public or utility model right. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public or the utility model right.

Carbon fiber reinforced plastics— Testing methods for in-plane shear properties—Part 2: Double V-notch shear method

JIS K 7079-2:2012

1 Scope

This Japanese Industrial Standard specifies the obtaining method of in-plane shear strength, in-plane shear fracture strain and in-plane shear elasticity modulus of the carbon fibre reinforced plastics according to the in-plane shear test (Iosipescu test) by using the double V-notched test piece.

This Standard is applicable to the laminated sheet (orthotropic long fiber laminate, quasi-isotropic long fiber laminate, etc.) composed of unidirectional reinforced material (UD), unidirectional reinforced layer or woven fabric reinforced layer.

Warning: Persons using this Standard should be familiar with normal laboratory practice. This Standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS B 7184 Profile projectors

JIS B 7502 Micrometer callipers

JIS B 7507 Vernier, dial and digital callipers

JIS K 7010 Vocabulary for fibre reinforced plastic

JIS K 7016-1 Fiber-reinforced plastics—Methods of producing test plates—Part 1: General conditions

JIS K 7072 Preparation of carbon fibre reinforced plastic panels for test purpose

JIS K 7100 Plastics—Standard atmospheres for conditioning and testing

JIS K 7144 Plastics—Preparation of test specimens by machining

JIS Z 8401 Guide to the rounding of numbers

3 Terms and definitions

For the purposes of this Standard, the terms and definitions given in **JIS K 7010**, and the following terms and definitions apply.

3.1 dummy test piece

a dummy used for positioning of which the dimensions (width and length) are the same as those of the test piece