

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS K 7092 : 2005
(JCMA/JPIF/JSA)

**Test method for interlaminar shear
strength of carbon fibre reinforced
plastic by double-notch specimen**

ICS 83.120

Reference number : JIS K 7092 : 2005 (E)

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 according to the proposal of establishing a Japanese Industrial Standard from The Japan Carbon Fiber Manufacturers Association (JCMA)/The Japan Plastics Industry Federation (JPIF)/Japanese Standards Association (JSA), with a draft of Industrial Standard based on the provision of Article 12 Clause 1 of the Industrial Standardization 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, utility model right or application for registration of utility model after opening to the public which have technical properties. 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, utility model right or application for registration of utility model after opening to the public which have the said technical properties.

Date of Establishment: 2005-12-20

Date of Public Notice in Official Gazette: 2005-12-20

Investigated by: Japanese Industrial Standards Committee
Standards Board
Technical Committee on Chemical Products

JIS K 7092:2005, First English edition published in 2006-06

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 2006

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

Contents

	Page
1 Scope	1
2 Normative references	1
3 Definitions	1
4 Condition control and testing atmosphere	2
4.1 Condition control	2
4.2 Testing atmosphere	2
5 Testing equipment and apparatus	2
5.1 Testing machine	2
5.2 Testing jig	2
5.3 Dimension measuring apparatus	3
6 Test pieces	3
6.1 Shape and dimensions	3
6.2 Preparation of test piece	5
6.3 Inspection of test piece	5
6.4 Number of test pieces	5
7 Operation	5
7.1 Measurement of test piece dimensions	5
7.2 Setting of test piece	6
7.3 Testing velocity	6
7.4 Starting of testing machine	6
7.5 Record	6
7.6 Pattern of breakage	6
8 Calculation	7
8.1 Interlaminar shear strength	7
8.2 Rounding of test result	7
8.3 Standard deviation and coefficient of variation	7
9 Report	7

Test method for interlaminar shear strength of carbon fibre reinforced plastic by double-notch specimen

1 Scope This Japanese Industrial Standard specifies test methods for determining interlaminar shear strength of unidirectional reinforced material and fabric reinforced material of carbon fibre reinforced plastic by compression of double-notch specimen.

Remarks : In this method, the fibre direction of unidirectional reinforced material and the strand direction of fabric reinforced material shall be the same as the longitudinal direction of test piece and the loading direction.

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 6900 *Plastics—Vocabulary*

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 7076 *Testing methods for compressive properties of carbon fibre reinforced plastics*

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 Definitions For the purpose of this Standard, the definitions given in **JIS K 6900** and the following definitions apply.

3.1 double-notch two notches on opposing faces of the central part of strip-shaped test piece machined halfway through the thickness and spaced a fixed distance apart (see figure 1)

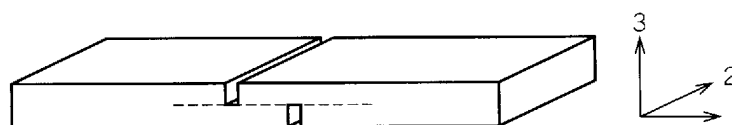


Figure 1 Double-notch test piece

3.2 notch distance the distance between the staggered notches (see figure 5)