

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS T 8121-3 : 2006

(JSAA/JSA)

**Protective clothing—Gloves and
arm guards protecting against cuts
and stabs by hand knives—
Part 3 : Impact cut test for fabric,
leather and other materials**

ICS 13.340.40; 13.340.99

Reference number : JIS T 8121-3 : 2006 (E)

Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of Health, Labour and Welfare and 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 Japan Society Appliances Association (JSAA)/ Japanese Standards Association (JSA) with a draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law.

This part of **JIS T 8121** has been made based on **ISO 13999-3**:2002 *Protective clothing—Gloves and arm guards protecting against cuts and stabs by hand knives—Part 3: Impact cut test for fabric, leather and other materials* for the purposes of making it easier to compare this Standard with International Standard; to prepare Japanese Industrial Standard conforming with International Standard; and to propose a draft of an International Standard which is based on Japanese Industrial Standard.

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 Ministers 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.

JIS T 8121 consists of the following 2 parts under the general title “*Protective clothing—Gloves and guards protecting against cuts and stabs by hand knives*”:

Part 1 Chain-mail gloves and arm guards

Part 3: Impact cut test for fabric, leather and other materials

Date of Establishment: 2006-04-25

Date of Public Notice in Official Gazette: 2006-04-25

Investigated by: Japanese Industrial Standards Committee

Standards Board

Technical Committee on Protective Equipment for
Occupational Safety

JIS T 8121-3:2006, First English edition published in 2006-10

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

AT

Contents

	Page
Introduction	1
1 Scope	1
2 Normative references	2
3 Terms and definitions	2
4 Principle	2
5 Test apparatus	2
5.1 Blade-holding block	2
5.2 Test blade.....	2
5.3 Test specimen support	3
6 Sampling	8
6.1 Preparation of test specimens	8
6.2 Mounting a test specimen	9
7 Procedure	9
7.1 Setting up the apparatus	9
7.2 Test	9
7.3 Use of the reference material.....	10
8 Calculation.....	10
9 Estimation of measurement uncertainty.....	10
10 Test report	11
Annex A (informative) Recommendations for the specification of impact cut tests on materials and products such as gloves and arm guards	12
Annex 1 (informative) Comparison table between JIS and corresponding International Standard	16

Protective clothing—Gloves and arm guards protecting against cuts and stabs by hand knives— Part 3: Impact cut test for fabric, leather and other materials

Introduction This Japanese Industrial Standard has been prepared based on the first edition of **ISO 13999-3** *Protective clothing—Gloves and arm guards protecting against cuts and stabs by hand knives—Part 3: Impact cut test for fabric, leather and other materials* published in 2002 with some modifications of the technical contents.

The portions underlined with dots are the matters modified from the original International Standard. A list of modifications with the explanations is given in Annex 1 (informative).

This test is based on the impact penetration test given in **JIS T 8120**. It differs in that the blade-holding block and blade weigh 110 g rather than 1 000 g. The test specimen support is also changed to suit the testing of fabric, leather and other materials. The test is designed particularly to assess the stab resistance of materials for gloves and arm guards. The test is also suitable for assessing gloves exposed to severe abrasion and cutting threats such as motorcyclists' gloves, working gloves for handling concrete blocks or razor wire, or protective leggings and trousers for refuse collectors. Severe abrasion is a process involving multiple cuts and this test is a good indicator of abrasion resistance of the whole thickness of a material or sequence of materials.

It has been assumed in the drafting of this part of **JIS T 8121** that the execution of its provisions is entrusted to appropriately qualified and experienced people, for whose guidance it has been prepared. The apparatus described should only be used by competent persons and requires safeguards to prevent, as far as is reasonably practicable, injury to the operator and other persons.

1 Scope This part of **JIS T 8121** specifies an impact cut test for use on fabric, leather and other materials used in protective clothing, gloves and arm guards.

Annex A of this part of **JIS T 8121** gives recommendations for the specification of impact cut tests on materials and products such as gloves and arm guards and gives the list of information which should be specified in the product standard in order to be able to apply this test.

NOTE : The International Standard corresponding to this Standard is as follows.

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and **JIS** are IDT (identical), MOD (modified), and NEQ (not equivalent) according to **ISO/IEC Guide 21**.

ISO 13999-3:2002 *Protective clothing—Gloves and arm guards protecting against cuts and stabs by hand knives—Part 3: Impact cut test for fabric, leather and other materials* (MOD)