

This is a preview - click here to buy the full publication



IEC/TR 62780

Edition 1.0 2012-07

TECHNICAL REPORT



**Multimedia systems and equipment – Multimedia e-publishing and e-book –
Guideline for protection against mechanical stress during distribution of
e-books in CD and DVD media**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

PRICE CODE

M

ICS 17.100; 33.160.99; 35.220.30; 55.020

ISBN 978-2-83220-221-0

Warning! Make sure that you obtained this publication from an authorized distributor.

CONTENTS

FOREWORD	3
INTRODUCTION	5
1 Scope	6
2 Normative references	6
3 Terms and definitions	6
4 Residual strain of CD and DVD media	7
5 Guideline for protection of CD and DVD media	7
5.1 Medium inclusion within a book or magazine	7
5.1.1 Attaching a medium envelope on a page	7
5.1.2 Attaching a medium envelope to a gutter	8
5.1.3 Binding a substrate including a medium	8
5.1.4 Attaching a substrate including a medium to a cover of a casebound book	9
5.2 Media clamped in a medium case	9
Annex A (informative) Experiments and simulation of mechanical properties of CD and DVD media	10
Bibliography	13
Figure 1 – Attaching a medium envelope on a page	8
Figure 2 – Attaching a medium envelope (of paper or film) on a gutter	8
Figure 3 – Bookbinding of a substrate that includes a medium	9
Figure 4 – Attaching a substrate that includes a medium on a cover of casebound book	9
Figure A.1 – Shape of the test piece	10
Figure A.2 – Stress-strain diagram	10
Figure A.3 – Elastic limit observed in loading and unloading experiments	11
Figure A.4 – Stress distribution in DVD media	11
Figure A.5 – Bending test equipment	12
Figure A.6 – Support and load positions on the disc medium	12

INTERNATIONAL ELECTROTECHNICAL COMMISSION

MULTIMEDIA SYSTEMS AND EQUIPMENT – MULTIMEDIA E-PUBLISHING AND E-BOOK – GUIDELINE FOR PROTECTION AGAINST MECHANICAL STRESS DURING DISTRIBUTION OF E-BOOKS IN CD AND DVD MEDIA

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

The main task of IEC technical committees is to prepare International Standards. However, a technical committee may propose the publication of a technical report when it has collected data of a different kind from that which is normally published as an International Standard, for example "state of the art".

IEC 62780, which is a technical report, has been prepared by technical area 10: Multimedia e-publishing and e-book technologies, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

The text of this technical report is based on the following documents:

Enquiry draft	Report on voting
100/1927/DTR	100/1972/RVC

Full information on the voting for the approval of this technical report can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

A bilingual version of this publication may be issued at a later date.

INTRODUCTION

Some e-books are distributed by using interchangeable optical storage media such as CDs and DVDs. Those storage media are distributed being bound in paper books/magazines or attached to them in other appropriate manners. The media bound or included in books/magazines are suffered from strong pressure during their distribution and/or keeping, and sometimes become so damaged (broken or distorted) that e-book data can no longer be read.

In order to minimize those damages of e-books during their distribution, a guideline for protection against mechanical stress during distribution of e-books is required. Existing standards of optical storage media specify nothing about stress-strain characteristics. The guideline should specify how to deal with interchangeable optical storage media bound or included in paper books/magazines. Those specifications should be based on the stress-strain characteristics of the interchangeable optical storage media.

MULTIMEDIA SYSTEMS AND EQUIPMENT – MULTIMEDIA E-PUBLISHING AND E-BOOK – GUIDELINE FOR PROTECTION AGAINST MECHANICAL STRESS DURING DISTRIBUTION OF E-BOOKS IN CD AND DVD MEDIA

1 Scope

This Technical Report provides protection schemes against mechanical stress during distribution or keeping of e-books (see IEC 62229) stored in interchangeable optical storage media such as CDs and DVDs, and shows the stress-strain characteristics of the interchangeable storage media from which the protection schemes are derived.

This Technical Report supplements the information of handling multimedia e-books defined in IEC/TS 62229.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 62229:2005, *Multimedia systems and equipment – Multimedia e-publishing and e-book – Conceptual model for multimedia e-publishing*