SLOVENSKI STANDARD
SIST EN 23035:2000

01-april-2000

Dvo- in trislojni valoviti karton - Dolo ļ evanje odpornosti proti splo ģ ļ enju (ISO 3035:1982)

Single-faced and single-wall corrugated fibreboard - Determination of flat crush resistance (ISO 3035:1982)

Einseitige und einwellige Wellpappe - Bestimmung des Flachstauchwiderstandes (ISO 3035:1982)

Carton ondulé simple face et double face - Détermination de la résistance a la compression a plat (ISO 3035:1982)

Ta slovenski standard je istoveten z: **EN 23035:1994**

ICS:

85.060 Papir, karton in lepenka Paper and board

SIST EN 23035:2000 **en**

EUROPEAN STANDARD **EN 23035**

NORME EUROPÉENNE

EUROPÄISCHE NORM June 1994

UDC 676.273.31:676.017.42:539.411

Descriptors: Corrugated cardboards, tests, compression test, crushing strength

English version

Single-faced and single-wall corrugated fibreboard - Determination of flat crush resistance (ISO 3035:1982)

Carton ondulé simple face et double face - Détermination de la résistance à la compression à plat (ISO 3035:1982)

Einseitige und einwellige Wellpappe Bestimmung des Flachstauchwiderstandes (ISO 3035:1982)

This European Standard was approved by CEN on 1994-06-27. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

This European Standard has been taken over by CEN/TC 172 "Pulp, paper and board" from the work of ISO/TC 6 "Paper, board and pulps" of the International Organization for Standardization (ISO).

This document was submitted to the Unique Acceptance Procedure (UAP) and was approved without any modification.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 1994, and conflicting national standards shall be withdrawn at the latest by December 1994.

In accordance with the CEN/CENELEC Internal Regulations, following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of the international standard ISO 3035:1982 has been approved by CEN as a European Standard without any modification.

NOTE: Normative references to international publications are listed in annex ZA (normative).

Annex ZA (normative)
Normative references to international publications with their relevant European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

Publication	Year	Title	EN	Year
ISO 187		Paper, boards and pulps - Standard atmosphere for conditioning and testing and procedure for monitoring the atmosphere and conditioning of samples	EN 20187	

International Standard 3035

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Single-faced and single-wall corrugated fibreboard — Determination of flat crush resistance

Carton ondulé simple face et double face — Détermination de la résistance à la compression à plat

Second edition — 1982-12-01

UDC 676.273.31 : 676.017.42 : 539.411 **Ref. No. ISO 3035-1982 (E)**

Descriptors : corrugated cardboards, tests, compression test, crushing strength.

Price based on 2 pages

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been authorized has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 3035 was developed by Technical Committee ISO/TC 6, *Paper, board and pulps.*

This second edition was submitted directly to the ISO Council, in accordance with clause 6.11.2 of part 1 of the Directives for the technical work of ISO. It cancels and replaces the first edition (i.e. ISO 3035-1975), which had been approved by the member bodies of the following countries:

Belgium	Ireland	Sweden
Czechoslovakia	Israel	Switzerland
Egypt, Arab Rep. of	New Zealand	Thailand
Finland	Norway	Turkey
France*	Poland	United Kingdom
Germany, F.R.	Romania	USA
Hungary	South Africa, Rep. of	USSR
India	Spain	

* with the exception of sub-clause 5.1.1.

The member bodies of the following countries had expressed disapproval of the document on technical grounds:

Bulgaria
Canada**

** sub-clause 5.2 only.

Printed in Switzerland

Single-faced and single-wall corrugated fibreboard — Determination of flat crush resistance

1 Scope

This International Standard specifies a method for the determination of the flat crush resistance of corrugated fibreboard used in the manufacture of packing cases.

2 Field of application

The method is applicable to single-faced and single-wall (double-faced) corrugated fibreboard. It is not applicable to double-wall (double-double-faced) corrugated fibreboard.

3 Reference

ISO 186, *Paper and board — Sampling for testing.*

ISO 187, *Paper and board — Conditioning of samples.*

4 Principle

Subjection of a test piece from a representative sample of corrugated fibreboard to an increasing force applied perpendicularly to the surface by a compression tester having two flat and parallel platens, until the fluting collapses.

Measurement of the maximum force sustained by the test piece.

5 Apparatus

5.1 Flat crush tester: a motor-driven, platen-type compression tester.

The platens shall be large enough to take a test piece of the selected size (see 5.2) without the test piece projecting beyond the platens.[1] They shall also meet the following requirements:

— deviation from parallel not greater than 1 : 1 000;

— lateral play not exceeding 0,05 mm.

5.1.1 If the tester operates with one fixed platen, the other having a direct positive drive, the rate at which the platens approach each other shall be 12,5 ± 2,5 mm/min.

5.1.2 If the tester operates on the principle of beam deflection, the beam shall be such that test results will occur only within 20 to 80 % of the maximum range of deflection that can be measured with the apparatus.

The force applied by the platens shall be developed at a rate of either

110 ± 23 N/s (preferred)
or 67 ± 23 N/s

when the platens contact the test piece.

5.1.3 Testers fitted with digital read-out systems may be used, provided that it can be shown that the results obtained are comparable with those obtained using the testers described in 5.1.1 and 5.1.2.

5.2 Cutting instrument, having a circularly guided knife to cut test pieces with an area[2] of not less than 50 cm², with the cut edges clean and perpendicular to the facings of the corrugated fibreboard.

6 Sampling

Sampling shall be carried out in accordance with ISO 186.

7 Conditioning

The test pieces shall be conditioned in accordance with ISO 187.

1) The platens may be faced with a very fine emery paper, but where this is done, due regard should be paid to maintaining the faces flat and parallel.

2) Commonly used areas are 64,5 cm² (90,6 ± 0,5 mm diameter) and 100 cm² (112,8 ± 0,5 mm diameter). When the flat crush resistance is expected to exceed the capacity of the test instrument, a smaller test piece (commonly 32,2 cm²) may be used.